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Original Contributions

HOSPITALS FOR INEBRIATES.

BY DRS. R. H. COLEMAN AND A. M. ROSEBRUGH.

In the judgment of police officials throughout Ontario the present system of committing inebriates to prison for short terms utterly fails to reform the poor unfortunates who come before them.

A man arrested for drunkenness and sent to jail for a short term is discharged with the same appetite for drink and powerless to withstand the temptation, with a result that he is soon re-arrested and re-committed, and so the process goes on, until the man has lost all self-respect.

Some five years ago a society was organized in Toronto called "The Ontario Society for the Reformation of Inebriates." The object of the Society is:

1. To promote the reformation of indigent inebriates in Ontario:

(a) By making use of the public hospitals of the Province for the purpose, and (b) by combining therewith the Massachusetts Probation System.

2. The second object of the Society is to promote the reformation of inebriates in Toronto as follows:

A medical officer and probation officer attend the Police Court and offer medical treatment and a helping hand to inebriate prisoners found desirous of such help. The medical treat-

ment is given by the medical officer either in the home, at the office of the physician, or in a ward of one of the public hospitals of the city. The probation officer acts the part of a friendly visitor, assists in finding employment when necessary, and helps to a better life.

At the time the work was begun in Toronto, it was a comparatively new thing, both on this continent and in England, but within the past five years much has been learned by our own officials through experience gained in treating cases and from information gathered from the United States and Great Britain. The following synopsis of what is being done in other countries will show the trend the scientific treatment is taking, where the subject is being scientifically studied:—

In Great Britain there are three classes of institutions for the treatment of inebriates, as follows:

1. The " Retreats,"
2. The " Certified " Reformatories, and
3. The " State " Reformatories.

1. The " Retreats are private hospitals under Government inspection. There are twenty-two of these institutions in England.

2. The " Certified " Reformatories are established by Counties or Union of Counties, but the expense of maintenance is borne wholly by the Government. They receive cases committed to them by the Courts, and they are under Government inspection.

3. The " State " Reformatories are Government institutions for the segregation of imbecile and unmanageable drunkards, transferred from the " Certified " Reformatories. On account of the encouragement given by the Government through the " Inebriates " Act of 1898, the number of Certified Reformatories has increased from three to eleven, and during that period over 3,000 patients have been received from the Courts. The twenty-two " Retreats " receive on an average 500 cases a year.

Australia is profiting by the example of Great Britain in the public care of inebriates.

In New South Wales reformatory efforts were commenced by the Government in 1907. Institutions for this purpose have been established in connection with jails.

In Victoria an Institution for Inebriates was founded in 1907. At Lara a mansion has been purchased by the Government for the reformation of inebriates. The land attached covers one square mile.

In New South Wales a portion of Darlington Jail has been set apart for the reception of habitual inebriates on indeterminate sentences.

Germany has no State Hospitals for Inebriates, but private hospitals are assisted by the German Imperial Insurance System. There are about fifty private institutions for inebriates in Germany. They receive aid from local Poor Commissioners as well as from insurance companies.

Denmark has five private Institutions for the Reformation of Inebriates, and which receive Government aid.

Hungary subsidizes a private Inebriate Hospital near Budapesth.

Switzerland has eleven "Colonies" for the treatment of alcoholic cases. They receive aid from the Government monopoly in alcohol. Switzerland leads the world in the scientific study of alcoholism, and a large percentage of cures are reported.

United States.—Although there are at present but two State Hospitals in the United States for the treatment of inebriates, steps are being taken in a number of the States with a view to their establishment.

In Massachusetts, a hospital at Foxborough for the medical treatment of inebriates has been in operation for a number of years, and at Knoxville, Iowa, a hospital has been in operation for two or three years.

Two years ago the Legislature of *Minnesota* adopted a bill providing for the establishment of a hospital or reformatory, and at the last session of the *New York* Legislature a bill was adopted authorizing the establishment of a Farm Colony by the City of New York.

Farm Colonies.—At Cleveland, Ohio, there is a Farm Colony located on a very extensive tract of land for the reformation of inebriates. There is also a Farm Colony at Bridgewater, Massachusetts, with ample grounds, which is used for the detention, on indeterminate sentences, of vagrants as well as for the defective and apparently hopeless criminal drunkards.

A New Departure.

Massachusetts is making a new departure in its provision for the care and cure of its inebriates. A second Farm Colony is being established on a large tract of land such as will permit of three classes of inebriates, widely separated, receiving distinct and separate care and treatment, as follows: (1) A hospital and grounds for men; (2) A hospital and grounds for women; (3) A detention colony for observation and care of inoffensive but seemingly hopeless chronic inebriates.

The late Sir Oliver Mowat, when Prime Minister of Ontario, was strongly impressed with the great need of provision being made for the reformation of drunkards, and he had in mind the establishing of an institution for their reformation at Hamilton, but, much to his regret, public opinion did not seem to him to be sufficiently ripe to justify the expense at that time, and he was obliged to postpone the matter.

In 1891, the Ontario Prison Reform Commission reported very strongly in favor of the establishment of a Reformatory for Inebriates in Ontario, but as there was no public opinion strongly supporting this report, no action was taken in this direction.

A Hospital for Toronto.

In Toronto, the Ontario Society for the Reformation of Inebriates is working as aggressively as the funds in hand permits. Hospital treatment is given in the public hospitals, but as they are not equipped with facilities for up-to-date scientific treatment of inebriates, the results are not as satisfactory as could be desired. What is needed is a small special hospital devoted exclusively to the treatment of inebriates and in charge of a medical officer specially qualified for the work. The Executive Committee of the Society believes that the time has fully come when steps should be taken to supply this long-felt want. To this end, the co-operation of the Ontario Government, the City Council and the benevolent public will be asked. In this effort may we not also count upon the sympathy and good-will of members of the medical profession?

Society Proceedings

THE ONTARIO MEDICAL ASSOCIATION. THIRTIETH ANNUAL MEETING, NIAGARA FALLS, 30TH AND 31ST MAY AND 1ST JUNE, 1911.

The Association met at 10 a.m. on Tuesday, 30th May, 1911, for the purpose of registering members. The meetings throughout were held at the Clifton House.

At 2 p.m. the President, Dr. H. R. Casgrain, of Windsor, delivered his address.

Symposium on Appendicitis.

PATHOLOGY WITH LANTERN SLIDES.

N. T. Maclaurin, Toronto.—Researches by Ashof on 1,000 cases showed this disease to be commonest between the ages of 10 and 40 years of age; cases occur before and after these ages, but the chances decrease as the patient gets older. Males are affected twice as often as females. Increased blood supply from the appendiculo-ovarian artery probably accounts for this.

Heredity does not play any part in the causation of the disease; according to some authorities occupation does not predispose to appendicitis; it may be brought on by fatigue, irregular meals, and exposure to cold, causing congestion of the organ; it can also be caused by strains, violent purgation, and blows over the cecum; foreign bodies do not seem to be of much importance as a cause, although bristles, hairs, bits of lead, sand granules, and worms, etc., have been found in the diseased organ. The shape is very important, as kinks and bends may cause congestion or obstruction to the onward flow of its contents. The presence of feces, rather than being a cause, may prevent infection by protecting the glands of Lieberkuhn and the mucous membrane. Fecal calculi are formed in the appendix itself and contain mineral salts; these cause desquamation of the cells and an increase in the number and virulence of the organisms. The

calculus *per se* is harmless; some say it causes the inflammation, while others state that the inflammation causes the calculi. By occluding the lumen, irritating the mucous membrane, and increasing the virulence of the organisms, they may cause appendicitis; on the other hand they may prevent perforation by keeping back internal pressure from the apex. The micro-organisms oftenest found in the early acute cases are the streptococci and bacillus coli communis; one investigator states that in 90% the b. coli communis and 50% streptococci were found.

The little emboli found in the vessels of the removed organ, the so-called hematogonous cause, according to Ashof, are due to trauma while removing the organ.

Appendicitis is caused by: kinks and stenosis keeping up congestion; fecal matter, concretions, tumors (rare), foreign bodies, etc., block the lymphatics, cause hypertrophy of the organ and a deepening of the grooves; this in turn causes an increase of mucus that forms pabulum for the invading organisms.

According to Ashof three-fourths of all people suffer from appendicitis some time during their life.

SURGICAL TREATMENT.

H. A. Bruce, Toronto.—Operation is the only safe and sure cure; the so-called medical treatment may give temporary relief, but a recurrence is liable to occur at any time, and maybe at a time most inopportune to the patient, when he may be far away from good surgical treatment; even in mild cases we get abscess formation, which is only cured by operation.

Appendicitis may be divided into acute and sub-acute classes, the acute being again sub-divided into: (a) Simple acute; (b) With perforation; (c) With gangrene; (d) With localized abscess; (e) With general peritonitis; (f) The acute fulminating in which there is no time for adhesions to form and we get a general septic peritonitis.

The simple may be cured by the so-called medical treatment: ice bag, rest, abstinence from food, etc. The danger, however, is in the occurrence of a future attack. There is no mortality in early operation in these cases; the danger is not so great as in delay. For acute appendicitis the treatment is removal at the earliest possible moment; there is no time limit as a general rule

—judge each on its own merits. Early operation is the best of all; do not wait for a more favorable opportunity, we do not know what is going on inside, we can only guess at the pathological condition, we may not get abscess formation nicely walled off, but general peritonitis may follow. Nature provides antibodies to combat the infection, rather than trust to the uncertainties of nature, we prefer opening the abdomen, walling off with gauze as a protective, remove the source of infection, and thus assist nature and prevent complications. The best incision is along the outer border of the right rectus muscle; for early operation a small incision is best, a long one is certainly harmful; the gridiron incision leaves a strong abdominal wall, and we can drain here without fear of a hernia. For removal use a strong clamp on the base of the appendix, use a purse-string suture and invaginate the ribbon-like stump; the use of carbolic or the tieing of the stump are unnecessary. To make sure that the stump is well out of the way put on a second purse string, then sew the mesentery to the cecum, manipulate the bowels as little as possible; do not bring them out upon the abdominal wall if it can be avoided; use no antiseptics to the peritoneum; for closing use layer sutures; have the patient sitting up within a week and out of bed in ten days; have them up as early as possible in interval cases; the earlier we get them up the earlier we get them back to work; the longer they are kept in bed the longer it takes to get them back to normal.

For an acute case we make our incision along the outer border of the right rectus, pack off carefully with gauze; if an abscess has formed, remove the appendix, if one can do so without breaking down the natural adhesions; in any case remove the appendix before the patient leaves the hospital, and close the abdomen so as to guard against a future attack.

In case of acute fulminating, open the abdomen, remove the appendix, and drain with two drains, one in the pelvis and one in the appendix region; rubber tubes may cause ulceration of the bowel and set up a fecal fistula; better not to use them at all, but use cigarette drains instead; if, however, rubber tubes are used they should be removed within 24 hours.

One cannot emphasize too strongly the importance of Fowler's position for drainage in these cases.

NON-SURGICAL TREATMENT.

R. D. Rudolf, Toronto.—Some say always operate; others say never operate except in case of pus formation. Until recent years the treatment was entirely medical, and in those days of up-to-date surgery we find that the death rate from appendicitis constantly on the increase; in England in 1901 the reported deaths from this disease were 1,244; in 1902, 1,485; in 1903, 1,729. In Ontario in 1898 there were 384 deaths reported, while in 1908 there were 429.

It is only fair to judge the results of the general treatment of any disease by its death rate; for example, since the introduction of diphtheria antitoxin the death rate has been greatly reduced, while since the general treatment of appendicitis has been surgical the death rate has greatly increased, as shown by the above figures. This increase in death rate may be the result of:

(a) An increase in the prevalence and virulence of the disease.

(b) More or less complete abandonment of the medical treatment.

(c) Surgery as operated to-day not in skilled hands.

The tendency nowadays is for the physician to temporize and not to use the recognized forms of medical treatment.

As soon as you have recognized the disease, start the following treatment:

(i.) Absolute quiet and rest.

(ii.) Prohibit water only in sips; absolute prohibition is best.

(iii.) No purging on any consideration.

Relieve thirst by giving normal saline per rectum; for vomiting use lavage; purging causes perforation; Munyon tersely puts it: pain—aperient—perforation. Oshner says give no cathartics whatever. There will be no perforation if there is no aperient or anything else given by mouth; purgation usually spells perforation; absolute starvation and the use of opium freely; it lessens the suffering and stops peristalsis. If the pain is not too severe we omit the opium and apply heat or cold, but not both alternately as this sets up peristalsis. Treat even suspicious cases this way omitting the opium as it masks the symptoms. Many practitioners see cases clear up in a few hours under

this treatment. The advisability of operation depends upon whether skilled surgery is available or not. The severity of the case may be estimated by the leucocyte count, the pulse and temperature. With temperature 99, pulse 96 and leucocytes 14,000, the condition is probably catarrhal, while if the pulse, temperature and respirations are high and the leucocyte count low look out for general peritonitis. Give opium enough to keep the patient comfortable, avoid long journeys to a hospital or any unnecessary movement of the patient. Oshner says: Feed entirely by enemata, positively omit food by mouth, give absolute rest, salines per rectum for thirst, in every case too early for late and too late for early operation even in perforative and gangrenous appendicitis, and remove them later. He reports a death rate of 2.2 per cent. in a series of 1,000 cases all treated in this way.

When a patient recovers he may never have another attack, some say take it out after one attack, others say take it out after two or three attacks, there is no fixed rule to lay down. If skilled surgery is obtainable it is wise to have it removed after the first attack has been recovered from. We occasionally get a patient who never gets perfectly well after a first attack, these should have the appendix removed. During the discussion that followed, Dr. Howitt, of Guelph, emphasized the importance of getting the patient up early; he said that you should never go through the right rectus muscle.

Dr. Cruickshank, of Windsor, made the following pointed remarks: To say that operation is the only treatment of appendicitis is absurd. Where operation is fashionable the death rate is enormous. Ordinary medical treatment, including purges, is worse than surgery. From 25 per cent. to 75 per cent. of the human race have had appendicitis, and therefore these all require operation.

In Boston and New York, where the operation is fashionable, the death rate is much higher than in Vienna.

Purgation is absolutely bad treatment.

There is no specific treatment for appendicitis.

We use common sense instead of drugs.

The appendicitis exists from 2 to 7 days before the onset of pain.

When asked what he would do if he had appendicitis, he said: I would have an operation if (i.) the pain is real severe; (ii.) enough attacks to be a nuisance; (iii.) abscess or perforation; (iv.) chronic stomach trouble.

ADDRESS IN MEDICINE.

Dr. Thomas B. Futcher, Baltimore, gave the Address in Medicine. He chose for his subject "The Relationship Between the Ductless Glands and Carbohydrate Metabolism." He thanked the association for the great honor that had been done him in asking him to give the address.

He took up the functions of the pancreas, the adrenals, the thyroid, and the pituitary glands. The opinion was expressed that we must still adhere to the view of Bernard on the glycogenic function of the liver. When a person takes a meal that is rich in carbohydrates, the liver acts as a storehouse, and the amount of glucose in the blood is thus kept down to normal limits. The amount of glucose in the blood ranges from 1 to 12 per cent.

With regard to the pancreas it must be said that the Islands of Langerhans are really ductless glands embedded in the pancreas. When these are destroyed diabetes has been known to ensue. In this respect the work of Opie is very valuable. On macroscopic examination the pancreas may appear normal, but minute study of it will show that these islands have undergone degeneration. In 1904, Otto Conheim found that a combination of pancreatic and muscle juices was capable of converting glucose into carbonic gas and alcohol. He came to the conclusion that glucose is metabolised by the muscles when pancreatic juice is produced in normal amount and quality.

The thyroid gland plays an important part in the final disposition of carbohydrates. When the gland is too active the tolerance for carbohydrates is reduced, and glycosuria may result. In the opposite condition of hypothyroidism, or myxedema, glycosuria is very rare, if not unknown. The recent work done on thyroid proves that it definitely influences carbohydrate metabolism. This explains the occurrence of glycosuria in Graves' disease.

With regard to the adrenals, it was shown by Blum that the injection of an extract of adrenalin caused diabetes. It has also been shown that this substance in the adrenals is antagonistic

to that from the pancreas. When adrenalin dilates the pupils, it has been noted the pancreas is at fault, and there is likely to be present diabetes.

The pituitary gland has a very marked influence in giving tolerance to carbohydrates. When the gland is removed the animal dies because of its inability to metabolize carbohydrates. This regulating influence of the pituitary lies in its posterior lobe. The injection of pituitary extract causes regularly glycosuria. When the gland is removed the animal can tolerate large quantities of carbohydrates.

Evening Session.

In the evening session two very important addresses were given by Drs. Harris, of Chicago, and White, of Pittsburg.

The Relation of Laboratory Work to Medicine.

Dr. Norman N. Harris, Professor of Bacteriology, University of Chicago, gave his paper on this subject. He commenced by pointing out that at one time medicine was held in the clutches of superstition; at another by religion. Then, later, by a metaphysical school, and now by true scientific workers. This study was very fascinating, and during the history of medicine from time to time there were important discoveries made. The recent developments of the sciences had aided very much. Of all the factors that entered into the progress of medical knowledge none took a higher place than that of the modern laboratory. We have not yet fully realized to what an extent the laboratory has revolutionized the science of medicine.

The laboratory, in the first place, is where inductive method of imparting knowledge finds its place; in the second place, it's where the student receives his best mental discipline; thirdly, it represents applied science; and, fourthly, it is where the research work is being done.

The laboratory has now taken the place of the older method of teaching by didactic lectures. Lectures have their value, but are quite subordinate to this more practical teaching. In the laboratory the student receives his best training along the lines of close observation, and the application of science to medicine.

The most important role played by the laboratory is in the field of research work. It is the great testing shop of ideas and theories. The German ideal that the true physician must be

both a genuine clinician and a thorough expert in laboratory methods is the correct one. The tendency of the present day is quite clear that the clinician of the future will first receive a thorough training in the scientific workshop of medicine—the laboratory. This does not mean that the great work of the clinician is under-valued, but the ward must be aided by the laboratory, or indeed become a sort of clinical laboratory. This change will create men of better thought and greater power.

PUBLIC AND PROFESSIONAL ASPECT OF THE PNEUMONIA QUESTION.

By Dr. William Charles White, Medical Director Tuberculosis League, Pittsburg, Pa.—Pneumonia frequently doubles tuberculosis in the number of deaths per month; this is a true and alarming statement; yet millions of money are spent annually in trying to stamp out the latter disease, while very little, if any, is spent publicly in the fight against pneumonia.

Why do we not grapple more successfully with this disease?

(1) Our inability to produce lobar pneumonia in animals as we see it in man. In animals we get all conditions from immunity in pigeons to septicemia in rabbits on injection of pneumococcus.

(2) A second difficulty lies in the symbiotic action of micro-organisms which surrounds the action of pneumococcus infection of the human body. The pneumococcus is so frequently associated with other organisms that more than a suspicion is justified that the secondary organisms have some relation to the virulence of the infection. The symbiotic organisms are:

Streptococcus pyogenes,
Friedlander's bacillus,
Staphylococcus albus and aureus,
Influenza bacillus,
A pseudo-diphtheric bacillus.

This gives some representation of the task of isolating and segregating pure cultures.

(3) The relation of the leucocytes to this infection; whether they exercise a phagocytic function on the pneumococcus is in grave doubt. Ruth Tunnicliffe has published the results of her experiments as follows:—

(a) There is an increase in the phagocytic power of the leucocytes in mild cases of pneumonia:

(b) In severe cases the power of phagocytosis is diminished until the patient improves, when it rises above normal;

(c) There is no specificity in the phagocytic power of the leucocytes.

(4) Lack of knowledge of the chemical processes which occurs in the lobe of the lung which bears the assault of the infection and goes through the various stages of gray and red hepatization and resolution. The lung tissue itself will not serve as culture medium for pneumococcus; and it also has some baneful action on tubercle bacilli in vitro.

(5) Our lack of knowledge of the composition of serum of pneumonia patients, and of these animals that have been rendered, or are naturally immune to this organism.

(5) Our lack of knowledge of the composition of serum of pneumonia patients, and of these animals that have been rendered, or naturally immune to this organism.

What we do know positively about the pneumococcus:

There is a uniform presence of this organism in the nasal discharges and buccal cavity of practically every city dweller during many months of the year, and it is a striking fact that these are just as virulent as germs obtained from lungs of patients dying of pneumonia; the pneumococcus can live in the dark and in dried sputum for 35 days or more, in diffuse light for 30 days, and in sunlight for only a few hours, on cloth it will live longer; we are positive, further, that pneumococcic free persons may acquire the germ from positive cases, *i.e.,* those harboring pneumococci, that handkerchiefs, dishes, drinking cups, etc., are capable of transferring the organism; cases of house infection are fairly common. Also we get chronic conditions due to pneumococcus, *e.g.,* chronic endocarditis, malignant endocarditis, arthritis; the disease is a bacteriaemia and has therefore the whole body for a field, and often infects serous membranes, it causes otitis media, meningitis, bronchitis, conjunctivitis, etc.

With such facts why are we so slow to utilize our knowledge for the suppression of this disease. We should use the same methods as we do for tuberculosis, namely: education, segregation and fumigation.

The usual objection raised to this suggestion is that the two infections are so different that they cannot be handled in the same way.

This objection seems invalid in view of the following facts: Both are mainly pulmonary diseases; both are the result of organisms that are constantly present within and without the human body; both infections are contracted mainly by inhalation and hastened to their maturity by bad housing, bad food and unhygienic conditions; both are accompanied by cough and sputum containing myriads of the infecting agent; both are infective through droplets and air-dried sputum; both often result from unconscious carriers of the infection; both are house diseases; both have no specific cure; both have relapses; both produce sickness in lower animals; both become virulent by animal passage; both are capable of life outside of the body for days or even weeks; both remain quiescent in the body for varying lengths of time; and both are responsible for secondary chronic conditions.

Knowing these facts we are very neglectful in (1) not educating the public to this knowledge, (2) handling such patients in hospital wards without segregation of patients or their utensils, (3) neglecting special instructions to nurses, students and attendants about its infective nature.

The following suggestions seem timely and useful:

Segregation of patients and utensils, cleaning the noses and throats of all attendants by sprays and wash; careful washing of hands of all attendants, careful destruction of sputum and other discharges, sterilization of linen of patients, fumigation of rooms after occupancy, and the use of gauze, which can be burned, instead of handkerchiefs. Also to have nurses in dispensaries to do home nursing work in all cases of pneumonia.

The Reception.

After the reading of these papers the president, Dr. H. R. Casgrain, gave a reception for members and guests in the ballroom of the Clifton Hotel. It was well attended and was a most enjoyable event.

After the reception there was a smoking concert in the Convention Hall.

Surgical Section.

In the surgical section, on Wednesday morning, 31st of May, and Thursday morning, 1st of June, a number of papers were read and discussed.

Aids in the Diagnosis of Surgical Diseases of the Kidney and Bladder.

Dr. J. K. McGregor gave a paper on this subject. He paid special attention to the information that could be gathered from the direct examination of the parts. The X-ray and the cystoscope are now of the utmost value in revealing certain conditions. The X-ray will show stones in 90 per cent. of the cases. The cystoscope, however, is the most important means of diagnosis. A general anesthetic is rarely required. A hypodermic injection of morphia gr. 1-2 before the examination is useful. Alypin, in tablets of gr. 1 1-8, several being applied to the urethra, novocaine, or cocaine in 20 per cent. solution are also required sometimes.

The patient is placed on the back, with the hips slightly raised. Thorough antiseptic precautions are taken, both with the patient and the instruments. The cystoscope will reveal the presence of a calculus. The cystoscope is of the utmost value in diagnosing sarcoma, papilloma and carcinoma. It has been held that 90 per cent. of tumors in persons over 50 years of age are malignant. This is the view of Young, of Baltimore and Mayo, of Rochester. Some other authorities regard most of these growths as benign. As so many of these tumors are malignant it is best that the cystoscope be used early so as to settle any doubt there may be.

The meatoscope is of much value in clearing up certain conditions to be found in the anterior portion of the urethra.

The presence of pus or blood in the urethra should be noted. The catheterization of the urethra is fairly easy in a normal bladder. There may be considerable difficulty in cases of cystitis, as the parts may be drawn out of position, or hidden behind an elevated tubercle.

There may be obstruction of the urethra from stone or growths or tubercle. By means of the cystoscope the output of each kidney can be secured separately. When there is a hydronephrosis the fluid comes fast at first and then slower. In the normal kidney pelvis the fluid comes in jets. The normal kidney pelvis will contain 7 to 15 c.c. If it contains 25 to 40 c.c. there is likely some nervous disorder. If there be 50 to 150 c.c. there is hydro-

nephrosis. If there be more than 150 c.c. the case will usually require nephrectomy.

The functional action of the two kidneys may be determined by various tests Of these cryoscopy, the injection of indigo carmine, gr. 0.16 in normal salt solution into the gluteal muscle, and the phloridzin test, may be mentioned. Pyelography is a useful means of diagnosis. The patient is cystoscoped and a ureteral catheter passed, and a 5 to 15 per cent. solution of collargol injected slowly, while the radiograph is being taken.

The X-ray is of value in determining between conditions in the kidney and external to it, as gall stones.

A SHORT TALK ON THE SHOULDER, HIP, WRIST AND ANKLE.

Dr. McKeown, Toronto, took up this subject. Many cases of dislocation of the shoulder joint are unrecognized by the ordinary man. There is only one sure and certain way of diagnosing a dislocation of this joint, and that is by ascertaining the position of head of the humerus. Normally, it is situated external to the acromial process, if it is anywhere else is is dislocated. The reduction by Kocher's method is not always satisfactory, it is much better to rotate the arm externally very slowly, taking about five minutes to do it; then it will slip in very easily when the arm is brought across the chest with the elbow flexed.

Colles' Fracture.—The impacted form is often hard to recognize, and if unable to be broken down easily it is far better left alone. Some do better who never see a doctor, but simply put on a splint without any manipulation of the arm. A good way to reduce this fracture is first to bend the wrist away back, using a fair amount of force; then it will be comparatively easy to slip it back to its right place. Once it is set there will be a great deal of difficulty in getting it out again. A splint is unnecessary to retain the fragments in place, in any case a splint should not be kept on longer than ten days. Early manipulation of the wrist joint is very desirable.

Hip Fracture.—The important signs of fracture of the hip are crepitus and shortening; never look for crepitus, as it always causes greater injury, and may break down a slight impaction that may be present. It is impossible to differentiate between an intra and extra capsular fracture, and it does not matter, as the treatment of both forms is the same. Look at the iliofemoral

crease, if it is abolished more or less on the affected side due to the effusion into the joint it is a pretty sure sign of fracture. Luckily, impaction usually occurs, therefore never manipulate, as we are nearly sure to get a poor result in unimpacted cases. Even if the toe is very much everted, leave the position alone; better to have a leg that will carry weight than a weak one with a nice position.

Pott's Fracture.—The pain in this fracture is due to:

1. The foot being too far back.
2. The foot being too far up.
3. The astragalus pressing on the internal lateral ligament by eversion of the foot.

The joint should be moved three or four days after the accident, and every day afterwards, one cannot displace the bones in this way; the patient should walk in three or four weeks. Put up the foot in an over inverted position, using a Dupuytron's splint.

OPEN METHOD OF TREATING FRACTURES.

Dr. F. N. G. Starr, Toronto, gave a series of lantern slides, showing the results of the open method of treating fractures; the series included fractures of the humerus, head and shaft; the olecranon; radius and ulna; femur, head and shaft; and the tibia. In cases of a fracture of the leg it is only necessary to plate the tibia as the fibula will then come into position and remain there. The results obtained had been most encouraging; a noteworthy fact was the absence of all pain as soon as the ends were brought into apposition and kept there; he told of one case in which he plated the shaft of the femur and the patient walked out of the hospital in eight weeks; in every case the results were obtained sooner than is got by the splint treatment. One has to be sure of asepsis, and the rest is easy.

Dr. Wilson, Niagara Falls, said: Plating is the best means of getting excellent results, especially of the thigh and oblique fractures of the tibia and fibula; pain is relieved at once by perfect apposition of the fragments.

Dr. Primrose, Toronto, said: The important thing is thorough asepsis, and then ordinary skill is sufficient; there are some cases where plating is absolutely necessary; for example, the head of the humerus with the upper fragment rotated outward.

He never had a case yet that gave him the least bit of anxiety or worry as to the final outcome. He did not advocate treating all cases in this way, but only those in which we could not get good apposition by the ordinary way; in these open up and either plate or wire.

Dr. W. W. Jones, Toronto, said: Always give an anesthetic in the reduction of fractures, especially in children and near joints; always have a fellow practitioner present to share the responsibility; use considerable force in reducing fractures, especially of the lower extremity; we can often get good results by flexing the limb and taking away the muscular action and spasm.

This paper was discussed by Dr. T. W. E. Wilson, Niagara Falls; Dr. A. Primrose, Toronto; Dr. W. Burt, of Paris; Dr. Ross, Barrie; Dr. Warner Jones, Toronto, and Dr. Ernest Wilson, Toronto.

THORACIC SURGERY, WITH LANTERN DEMONSTRATION.

Dr. E. Von Eberts, Montreal, in his address, confined himself to the surgery of empyema, and illustrated with a number of lantern slides.

By experimentation on rabbits and dogs in Montreal it was found that by removing the pleura, part of a lung, or even a whole lung, the space was obliterated subsequently by hypertrophy of the part of lung left on the operated side, bulging of the mediastinum and bulging upwards of the diaphragm. This is especially true on removing the lower lobe. One case was shown where the left upper lobe had been removed, and the space was obliterated by hypertrophy of the right upper lobe, and not by the hypertrophy of the left lower lobe, which was encased in a fibrous sheath and bound down to the thoracic wall. This obliteration only occurs if there is a negative pressure in the space. This is the important principle to recognize and carry out. Have a tension equivalent to or slightly less than the average intra-pulmonic tension.

The persistence of empyemic cavities is due to the pneumothorax which occurs at the time of dressing, and the greater the pneumothorax the slower the cavity is to fill up.

During inspiration we get negative pressure for a short time, and nature takes advantage of even this brief period to close up

the cavity by granulation tissue and not by expansion of the lung. There is also a slight negative pressure produced when the cavity has been packed with gauze at time of dressing.

The tendency heretofore was to ignore completely this physiological principle and fact, and to make the chest wall conform to the cavity, instead of making the thoracic viscera conform to the cavity.

Several schemes have been devised to produce and maintain this negative pressure:

1. Continual pneumatic drainage is good treatment.

2. Some valvular apparatus for allowing pus and air to escape, and preventing ingress of air. There have been a number of these devised, but all are deficient in not continuing to work properly along this line.

At present there are two efficient methods:

(a) Rib-trephining, devised by Dr. Robinson of Boston.

(b) A special drainage tube devised by the speaker. This tube is made of rather stiff rubber, with a bend on the part to be inserted into the wound; it is conical in shape, so as to efficiently fill the wound.

The tube passes through (from within outwards) a sterile felt pad, smeared with zinc oxide ointment; this is put on the chest wall, then a layer piece of ordinary thin rubber; outside this a harder piece of rubber, all three closely fitting round the tube. This constitutes the thoracic dressing and is attached by means of adhesive plaster over the middle rubber. Outside this dressing the tube is flexible and softer and has a valve on it that can be opened and closed by means of a screw. The tube is attached to a glass bulb, and to the opposite end of this bulb is attached a second rubber tube with a valve.

Technique of Operation.—Always use local anesthesia, cocaine 1 per cent., and, if properly used, the operation can be absolutely painless, even in children.

A circular incision is made; skin flap elevated; muscles split along line of fibres; periosteum incised and flaps raised. Then a special periostal elevator is used to insert beneath the rib; a curved one with a groove in it to hold the saw, as a saw is always used instead of bone forceps. Two or three centimetres of rib are resected. The ends of the ribs are then plugged with Hor-

sley's wax to prevent their infection and necrosis, which always takes place in small amounts when bone forceps are used. (The necrosis may be unobserved and go off in the discharge in cases of long suppuration.)

The lower periosteum is now incised; the pleura opened and the pus escapes. As soon as air begins to go into the cavity, plug with one finger. Now the advantage of local anesthesia is shown in the assistance given by the patient in forcing the pus out of the cavity, holding his breath while you insert a finger or the drainage tube. The tube is always inserted with the inner valve closed. Then attach the glass bulb, and a Politzer's air bag to the distal rubber tube; by this means a negative pressure is established; tighten the outer valve, remove the Politzer, loosen the inner valve and the drainage is established. The glass bulb shows the kind of discharge and collects the amount. When you wish to change it close the inner valve, remove the glass bulb, dispose of the discharge (and there is no odor), sterilize and fasten up again. The tube in the wound is left for three or four days before it is changed, and then it is done constantly by having a second tube ready to insert when the first is withdrawn—the patient helping by holding his breath.

The advantage of the curved tube inside the thorax is to prevent the too rapid filling of cavity by the lung and diaphragm. It has a disadvantage, however, of causing pain by pressure on the diaphragm. Another cause of pain is pressure of the ends of the ribs on the diaphragm after three or four weeks.

Cases of acute and subacute empyema.— Of peripheral lung abscess, of pyo-pneumo-thorax with lobe of lung collapsed and its function lost by infiltration and adhesions of the alveolar walls, have been treated by this negative pressure device, and in every case the cavity has been obliterated by compensatory emphysema of remainder of lung, bulging of mediastinum heart and diaphragm, and was conclusively shown by a series of lantern slides of X-ray pictures.

In one case of acute empyema the cavity was obliterated in thirteen days. In this class the negative pressure should be kept up for some days after obliteration of cavity in order to be sure that we have firm plastic healing. During the treatment of any of the cases use the modern hygienic treatment of fresh air and forced feeding during convalescence.

The paper was discussed by Drs. Primrose and Bruce, of Toronto, and Robert Lucy, of Guelph.

TWO CASES OF PHLEGMONOUS ENTERITIS.

Dr. L. W. Cockburn, of Hamilton, reported these cases. He referred to the statement of Moynihan that acute intestinal obstruction was one of the most urgent conditions the surgeon had to do with. He mentioned that obstruction was one of the most prominent symptoms in these two cases. In both cases an operation was performed. The diseased portion of bowel was removed. Both patients made good recoveries.

These cases were discussed by Drs. Primrose, Gunn, Parry, Ewart Wilson and Marlow.

CURE OF INGUINAL HERNIA.

Dr. Robert Lucy, Guelph, read a paper on this subject. The incision should be made by beginning one inch external to Poupart's ligament and curving upwards and inwards, it is made to end at the pectineal eminence. This flap is dissected down to the muscle and turned downwards. The sac is invaginated by means of curved forceps into itself. The forceps retain a hold of the invaginated fundus and bring it out through an opening in the abdominal wall one inch external to end of wound, the skin being retracted. The sac is drawn taut, cut off and the stump dropped back into wound. Goldspohn's and Bassini's technique were mentioned. From outer angle sew external oblique to upper edge of Poupart's ligament down to point where the cord and vessels emerge over pubic bone.

BACILLUS AEROGENES CAPSULATUS.

Dr. R. H. Patterson, of Hamilton, took up the subject of bacillus aerogenes capsulatus. The characteristics of the bacillus were given. The bacillus divides by fission, but it will spore in suitable media. The gas formed by the bacillus contains 64 per cent. hydrogen and 28 per cent. carbon dioxide and burns with a bluish light. The bacillus has been found in connection with infected uteri, lungs, pleurae, meninges, and necrosing surfaces. It has also been found in connection with pernicious anemia.

A case was reported of a young man of 33 years of age, who

sustained a compound fracture and dislocation of the tibia and fibula. The wound was thoroughly cleansed and a drainage left. The conservative treatment is by free incisions and injections of peroxide of hydrogen. The safest is amputation above the line of infection.

Drs. Garrow and Lincoln, of Montreal; Dr. Williams, of London, and Dr. Ewart Wilson, Toronto, discussed the paper.

DIAGNOSTIC VALUE OF THE CYSTOSCOPE.

Dr. George Ewart Wilson, Toronto, read an exhaustive paper on this subject. He referred to the discovery of this useful aid to diagnosis, and their varieties. For catheterization No. 22 French is employed, while for examination only No. 18. Before using the instrument one should study its use on the cadaver or on the phantom bladder. It must be borne in mind that objects are reversed in position, though now some instruments correct this. In making the examination the urethra must be made to admit a 22 French; there must be about 4 ounces of clear fluid in the bladder, and some prefer the urine if it is of average color. The patient should be given 10 grains of urotropine three times a day for 24 hours prior to using instrument, and a pint of Vichy water half an hour before. For a lubricant glycerine is preferred.

The catheter for the ureter should be a No. 7 French. The opening should be viewed as nearly as possible at right angles.

The reader of the paper gave a careful description of the interior of the bladder and the various objects that would be seen. It is now generally held that there are scarcely any conditions that contraindicate the use of the cystoscope.

A careful description was given of the various diseased appearances that would be met with, such as acute and chronic inflammation and ulceration. The examination of an ulcerated condition is of much importance on account of the possibility of tuberculosis. With regard to tumors the two varieties met with are papillomata and carcinomata.

In tuberculosis of the kidney there comes to be an irritation at the orifice of the ureter, and the patient may complain only of bladder trouble. In addition to tuberculosis the cystoscope aids in diagnosis of stone in the kidney. In all cases of blood in the urine the instrument is of much use. The paper was very fully discussed by Dr. Warner Jones, Toronto; Dr. E. E. King, To-

ronto, and Dr. Nagle. They gave their technique and methods as to the use of local anesthetics, etc.

The Section of Medicine.

This section met on the forenoons of 31st May and 1st June. During these sessions a number of papers were read and discussed.

UPPER AIR TRACT INFECTIONS.

Dr. McPherson, New York, considered that this subject was coming more and more into prominence. Very many infections found their way into the system through the upper portions of the respiratory and digestive tracts. From these infections in these regions many poisons found their way into the general system.

DIAGNOSIS OF CONDITIONS CAUSING HEMATURIA.

Dr. J. J. Mason, of London, Ontario, gave a paper on this subject. Patients with hematuria should be examined thoroughly, both generally as well as locally. Some drugs, such as senna, rhubarb, carbolic acid, and excess of bile pigments and uric acid in the blood, gave rise to a bloody color in the urine. The microscope would distinguish between hematuria and hemoglobinuria. Falls and injuries might throw light on the condition and enable one to arrive at a correct conclusion. The history of certain diseases was also of much importance. Tuberculosis, rheumatism, valvular disease, scarlet fever, septicemia, or influenza might cause nephritis and give rise to hematuria. Certain drugs could also inflame the kidneys, such as cantharides and turpentine. The general examination should be taken up first. All general and local diseases in any part of the body should be noted.

THE PRESENT STATUS OF RADIUM THERAPY.

Drs. W. H. B. Aikins and F. C. Harrison, of Toronto, presented a paper with lantern slide demonstrations on this subject.

As a result of the experimental work done chiefly by Dr. Louis Wickham, of Paris, radium therapy has been placed on a sound and scientific foundation. During the past year many new methods of using radium have been discovered. The older and original methods by means of plaeques and tubes still hold a large place, but by using small quantities of radium salts in solution injected into the tissues, the alpha rays, which form

about 90 per cent. of the available radiation, can be utilized, whereas by the former methods they were practically prevented from exercising any action. The use of radio-active waters and baths has been found of great benefit in various diseases of metabolism. Radium ions have also been used with the continuous electric current, and by this means the radium can be introduced to a depth of five to nine centimetres into the tissues.

The various diseases in which radium may be of service were then discussed, some very excellent lantern slides being used to illustrate the subject. As an adjuvant in many chronic skin diseases, as eczema, psoriasis, lupus, etc., radium is invaluable. Naevi and angiomata can be made to disappear without scarring. The writers had had very excellent results with the use of radium in goitres. In the treatment of malignant disease radium has a definite place. In superficial cancers it should be the treatment of election, as practically all conditions respond well to its use. In more deeply seated lesions the procedure at present should be to combine radium treatment with surgery, radiating the field before operation, with extensive post-operative use to prevent recurrence. Statistics show that with this procedure the chances of recurrence are much diminished.

ETIOLOGY AND PATHOLOGY OF CHRONIC CONSTIPATION.

Dr. S. H. McCoy, St. Catharines, read this paper. The phenomena of passage of food along the intestines is caused by really two mechanisms. It is under the control of the sympathetic nervous system as far as the sigmoid flexure, and from thence it is also aided, or otherwise, by conscious cerebration.

Hertz divides chronic constipation into two great classes: *First,* Detention of bowel contents from the stomach to the pelvic colon. *Second,* Inability to empty all below the pelvic colon.

The *first* may be caused by:

(a) Deficient motor activity caused by poor muscle, due to senility, anemia, cachexia and constitutional condition.

(b) Obstruction.

The *second* may be caused by functional or organic depression of the nervous system, as seen in neurasthenia, tabes and senility. In fact, constipation is often one of the earliest symptoms of a nervous breakdown.

All of us have seen patients with indigestion, who imagined it could be cured by eating less; they tried it and chronic con-

stipation developed, making the last case worse than the first. Also the food of the well-to-do is so concentrated that there is not enough residue left from absorption to produce a stool. Anything stimulating the solar plexus produces inhibition of the intestine from the splanchnic supply; the chief inhibitor being prolonged abdominal pain.

Obstruction may be caused by hard feces, having many causes, *e.g.*, diabetes, excessive sweat, deficient intake of water, etc. Kinking of bowel associated with visceroptosis and peritoneal adhesion has been regarded as cause of chronic constipation, but Hertz shows it rather to be due to weakened abdominal muscles in these cases, which act first, by not having muscles sufficiently strong to start act of defecation; second, their laxity allows over-distension of the bowel by gas, and thus weakening the bowel.

Nerve bankruptcy, by causing loss of muscle tone, may be a cause and not a result of the disease.

As to adhesions, Mollisin, Cameron and Virchow find intestinal adhesions at nearly all autopsies, and yet no chronic constipation in the living subject.

Arbuthnot Lane considers these adhesions and bands as cause of many cases. On this belief he has perfected his operation of short circuiting the intestine and doing away with the function of the colon.

Loss of reflex action and dilatation of lower part of colon are both usually produced by disregarding nature's call to defecate; laziness, pressure of business, false modesty, fear of pain from hemorrhoids or fissure, etc., are responsible for the procrastination. Resistance of each subsequent call makes the call weaker and weaker, until a person can go around with the rectum loaded for days without the desire to defecate returning

Bowels can be trained very accurately to habits of regularity, and if allowed to carry out their function will do so without trouble.

Obese people who lead a sedentary life are very prone to chronic constipation, not always on account of weak abdominal muscles, but because of fatty infiltration in the muscles of the bowel, causing slow passage of feces. Constipation found in enteroptosis is due to weak abdominal muscles and not to kinking of bowel. Anything affecting the relaxation of the diaphragm, *e.g.*, emphysema and asthma, tends to produce constipation, and

lastly, constipation is produced by spasm of the sphincter ani, caused by anal ulcer, hemorrhoids, fissure or neurasthenia. This is benefited by stretching.

THE TREATMENT OF CHRONIC CONSTIPATION.

R. D. Rudolf, Toronto, took up this topic. Chronic or habitual constipation is perhaps the most common ailment to which mankind is subject.

Some people have a gloomy outlook on any day in which the bowels do not move, and if this function has been satisfactorily performed the outlook is bright accordingly. If, however, they should chance to forget the omission they feel no ill-effects. We conclude therefore that the result is largely psychic.

For this condition the laity resort very largely to medicines, but lately there has been a great wave of opinion against this wholesale purging, and some physicians declare that practically all cases of chronic constipation may be permanently cured by psychic means alone. Dr. Lyon, of Buffalo, two years ago reported 68 cures out of 69 cases.

Normally the bowels should move once daily; there is no strict rule to this effect; some people are in good health whose bowels move only every second or third day; others neeed two daily movements to keep healthy.

One might define chronic constipation as a state in which the bowels move less frequently and thoroughly than is the custom of the individual under consideration.

A. F. Hertz makes two classifications:

(a) Those called intestinal constipation, in which the passage through the intestine is delayed while defecation is normal.

(b) Those in which the feces reach the colon without abnormal delay, but their final expulsion is not adequately performed. Hertz states that normally the rectum is empty, and when feces enter the pelvic colon a sensation is at once produced by stretching of the muscular walls of the rectum, which is interpreted by the brain as a desire to defecate. Resist this desire, and soon the rectal wall relaxes, the sensation disappears, although the contents are still in the bowel.

Causes of constipation:

1. Bad habit.

2. Diet errors: (a) Not enough indigestible material; (b) Not enough water; (c) Astringent.

3. Too complete absorption of fluids, due to (a) Exercise; (b) Sweating; (c) Urination.

4. Deficiency of intestinal, biliary and pancreatic secretions.

5. Loss of tone of muscular wall of the bowel.

6. Obstruction due to (a) Foreign body or hard feces; (b) Spasm; (c) Paralysis of a portion of the bowel.

Very often several of these causes are at work in the same case. In treatment, find the underlying cause and remove it if possible. Patients should be enjoined to go to stool regularly, and at a fixed hour every day. If unsuccessful that day, miss it altogether and go at same time next day; this helps to train the muscles to periodicity. Do not fly to laxatives, as these disturb the natural function and rhythm for several days. Diet should contain lots of debris material in its composition, and thus ought to include much vegetable material. Astringents and farinaceous foods and strong tea should only be taken in moderation. Plenty of fluids, especially in cases of excessive sweating from either exercise or disease.

When the tone of the bowel is at fault, cold baths and abdominal massage are useful.

In the majority of cases of chronic constipation we can, by enjoining regular attendance at stool, giving plain and bulky and non-astringent diet and lots of water, and advising plenty of exercise, completely cure the condition.

But in many cases we need the aid of a drug to establish the regular habit of the bowel.

Drugs either increase the watery contents of the intestine as salines and various mineral waters; or, by stimulating the muscular wall to better tone and contraction; most of the vegetable cathartics act in this way. With care, these vegetable aperients may be gradually reduced while the good effect remains, markedly seen in cascara sagrada.

Sulphur is much used in this disease, and is very valuable. When the trouble is due to inadequate expulsion, the enemata are valuable; plain cold water or warm soap and water are usually used, and just sufficient should be used as is needed to set up the reflex act of defecation. In these cases where there is a

want of tone in the bowel, strychnine is a valuable addition to any remedy.

Agar has been advocated lately, as it swells up and thus enlarges the stool; given in doses of about an ounce a day. In spasmodic constipation, due to fissure or other painful lesion, belladonna is the best drug, owing to its anti-spasmodic action.

Castor oil and calomel are rather adapted for occasional than chronic constipation; while operative treatment is useful in cases of mechanical obstruction.

A NEW FUNCTIONAL TEST FOR THE KIDNEY BY THE PHENOL SULPHONE PHTHALEIN TEST.

Drs. L. G. Rowntree and J. F. Garaghty, Baltimore, contributed this paper. It was read for them by Dr. H. A. McCallum, of London.

The chemical composition of this substance is very complex; it is one of the derivatives of phenolphthalein, is easily soluble, is alkaline, is non-toxic to the tissues, and is excreted by the kidneys very rapidly; it begins to appear in the urine from three to ten minutes after being taken, and within two hours from 60% to 85% is recovered.

When it is excreted slowly or in small amounts we suspect chronic interstitial nephritis; if none is excreted we suspect the near onset of uremia, and give a grave prognosis, even if there are no clinical symptoms of a uremic condition. Two cases were cited in which this test was tried and denoted a serious kidney lesion, although there was not a single clinical sign or symptom pointing to any kidney trouble; one of these died the same night from uremic convulsions, and the other from the same cause one week afterwards. It gives an accurate idea of the *amount* of destruction of the kidney. The amount of the drug excreted and the time taken before it appears in the urine are the important points. One can give a definite prognosis—good if the amount and time are normal, bad if otherwise. One can also tell if a given kidney lesion is purely cardiac or due to Bright's disease; in the former the output is fairly normal, while in the latter cases there is a deficiency in amount as well as delay of time in appearance. It is a much better and more reliable test than blood pressure.

It is a very valuable test in surgery, before undertaking an operation this test should be made. In cases of urinary obstruction, where there are casts in the urine, the output of urine and urea may be normal, and no serious kidney lesion present, and therefore no contra-indication to operation; on the other hand, there may be no casts discoverable in the urine and yet a serious kidney lesion may exist. In cases of slight lesions we can test repeatedly, and thus tell whether the condition is getting better or worse; we can, therefore, select the time of operation; never attempt to operate if the drug is not secreted well.

Every practitioner cannot have a sample of urine tested in a well equipped laboratory to tell the amount secreted in a given time, yet there is a very simple way in which one can tell roughly and fairly accurately the amount excreted:

Take, say, twenty minims of a solution of phenol sulphone phthalein of any strength, it does not matter how strong; inject it into the patient either subcutaneously or intravenously, and collect all the urine passed for the next two hours; put a definite quantity of the urine (10 cc.) in a test tube and half fill the test tube with water, adding a few drops of sodium hydrate solution to make it alkaline. Then put twenty drops of the same phenol sulphone phthalein solution in a second test tube of the same size as the other, add water so as to have an equal quantity in each test tube; now compare the colors of the two test tubes, if of about equal densities then the secretion of the kidneys is good, if the color in the one containing the urine is about one-third as deep in the other, then we know that there is some lesion of the kidneys whereby they are only doing one-third the work they should be doing. Now, if we want to find out which kidney is affected most we simply do ureteral catheterization and test the urine from each side.

Conclusions: It is of great value in diagnosis and prognosis in nephritis; it shows the degree of the trouble; in cardio-renal trouble, it tells whether the heart or the kidney is most at fault; it shows impending uremia even when there are no clinical symptoms present; it tells when to operate and when not to operate; it tells whether the condition is unilateral or bilateral when separate catheterization is done; any person can do the test without any elaborate apparatus at the bedside.

In discussing the paper, the speaker was asked if the giving of the drug might not have brought on the uremic attacks in the two cases cited. He replied that the discoverers of the test claimed that it had no baneful influence on the kidney whatever.

OUR RESULTS WITH "606."

Dr. Campbell, Montreal.—Report of 128 cases with 165 injections.

As to the method employed; the first 19 were given in an alkaline solution by the intramuscular injection; this was very painful and was abandoned mainly for this reason. The next 10 or 11 were given intramuscularly in a neutral solution; this was not quite so painful afterwards, but the results were not so good. All the others have been given intravenously.

The apparatus used is simplicity itself; it consists of a small glass funnel, holding three or four ounces, about three feet of rubber tubing in two pieces, joined by a glass tube to enable one to see that the fluid is flowing; and an ordinary aspirating needle of size to suit the vein.

Mix the solution according to printed directions; it is very important to have the needle into the vein before giving the injection, as the fluid in the tissues around the joint causes intense pain. The dose given is always 0.6 gram.; he gave larger doses in one or two cases, and in cerebral lesions the dose is smaller. No matter what the result, he always gives a second dose wherever possible within six weeks of the first. The more sclerotic the sore the longer it takes to heal; healing depends on the free flow of lymph.

The dangers of intravenous method are:

1. Sepsis. This should easily be prevented by adhering strictly to the rules of aseptic surgery.

2. Embolism of air or particle of precipitate: this is not a serious one; an air bubble that may get through the needle is so small as to be of no harm in the blood stream and is readily absorbed; the speaker saw several particles of the precipitate get into the vein with no untoward effects.

After effects: Some showed no reaction at all; some were very sick for three or four days afterwards; most are sick for a couple of hours, and are all right in the morning; nausea

and vomiting were seen in every case where food was taken within two hours after the injection; many will have a rigor and chill for one hour, sometimes with headache and diarrhea; herpes was noticed in quite a number of cases, labial generally, one case had herpes zoster; in four cases jaundice developed three or four weeks afterwards.

Objections to this method: The only objection is the rapid elimination of the arsenic, the arsenic disappears from the urine about ten days after the injection, while intramuscularly we get arsenic in the urine three or four weeks after, and it persists in the muscle for months and is apparently not absorbed.

Advantages of the intravenous method: 1. It is easily done and cleanly given; 2. There is no pain and therefore no difficulty to get the patients to submit to a second injection; 3. We get the effect of the full dose of the drug, and at the shortest possible time.

Results obtained: Those with intramuscular injection gave as good results as is now got by the intravenous method. With the neutral suspension the results were not as good and the lesions disappeared more slowly. Intravenously the results were spectacular, the lesions and spirochaetae disappeared with remarkable rapidity.

Recurrences: There were three recurrences in the intramuscular series, two of these were cases of secondary syphilis, one of which, after four months, showed an atypical rash, which disappeared on giving a second injection; this rash looked like a rosacea, was extremely itchy, and deceived the dermatologists. The 11 cases of neutral solution gave four recurrences; one of secondary in a week, and one of congenital after three months; this one was given an intravenous injection, and still there was a recurrence. With this exception, there was no recurrence after intravenously given.

In this series there were primary, secondary, combination of both, tertiary, congenital, locomotor ataxia, cerebral and eye cases.

There seems to be a greater tendency to pigmentation than when mercury is the treatment.

Does 606 kill spirochaetae? Yes, shown by their disappear-

ance and by the absence of the Wassermann reaction. The spirochaetae changed in two or three hours afterwards; they become less lively and some are broken up. By the next day most cases showed none, in a few instances they were present for 48 hours; this does not include the recurrences.

Does it affect the eyes? In the literature there is one case of blindness reported; this patient had had several injections of some mercurial preparation before the giving of "606." In his series there were three with affected eyes, two with definite syphilitic lesions before the treatment, the other had no eye symptoms before, but a retinitis developed after that readily cleared up in a few days.

Does it cause any other danger? In the literature there is one death reported—that of an adult who was given the intravenous treatment. There was no death in his series.

The effect on the Wassermann reaction is a marked weakening in every case, and sometimes it disappeared in seven or eight weeks.

Does it cure syphilis and prevent recurrence? Time only can tell. It must be judged only by a series of intravenous injections with the maximum dose. In his series there were two who returned some time afterwards with a primary sore—a reinfection.

What is the need of mercury with "606" It should be used, as we have not a sufficient knowledge yet as to the permanent value of " 606." The objection to this is that we will not be able to tell if the results are due to the mercury or to the " 606." There will be, however, many cases where mercury will not be taken from which we may get statistics of the value of " 606." If it only kills the spirochaetae it is indeed a very useful remedy.

Dr. A. McPhedran, Toronto, stated that his experience was limited to a rather small number of cases, and the results of these did not make him very strongly impressed with the efficacy of the drug; he used small doses, in most of his cases from 0.3 to 0.5 grams. He cited one case of a man who had severe shooting pains in his legs and serious eye trouble, but no optic atrophy, to whom he gave the maximum dose, and followed it in three days with a second dose of 0.3 grams; the

symptoms disappeared in a few days, and the man felt perfectly well for about four weeks, after which the symptoms began to return, and he is gradually getting back to his original condition. He also told of using it in a case of pernicious anemia with some little improvement at first, but nothing permanent.

Dr. G. W. Ross, Toronto, cited two cases in which there was clotting of blood in the veins on attempting to give "606"; one of these was given citric acid for a while, to lessen the coagulability of the blood, and a second injection was given successfully subsequently.

Dr. R. A. Gordon told of two cases which showed alarming signs of shock and collapse immediately after the injection; it lasted for half an hour, and then the patients felt all right.

Dr. W. B. Thistle told of trying it in two cases of pernicious anemia: in one he gave two doses and the red blood count had increased from 1,300,000 to over 3,000,000, and the hemoglobin improved in proportion. The other case had only one injection, and showed some improvement.

One man stated that if the hypodermic needle was washed in normal saline solution or sterile water before being injected, and washed out before being withdrawn, it would minimize the pain, as the greater part of the pain was caused by the irritation of the drug.

Another stated that the medical profession should drop the name "606" and somebody else said that the name "Salvarsan" was just as objectionable, as neither meant very much; better use the name "Arseno-Benzol."

Dr. Strathy, Toronto, said that in his experience with the Wassermann reaction it disappeared in some cases after giving "606," while in others it was present after but not before the injection.

Dr. MePhedran suggested that the cerebro-spinal fluid be taken for the Wassermann test in those cases that did not give it with the blood serum.

THE BIOLOGICAL ASPECTS OF TUBERCULOSIS.

Dr. A H Caulfield discussed in his paper a number of the recent views on the immunity in this disease and the relationship in the various types of the bacilli. It was stated that patients may reach immunity along different biological paths. Attention

was directed to the marked variations in the clinical course in many cases. The subject of the tuberculin test was gone into and reasons given for positive and negative results. The reactions that occurred in the antigen serum combination were carefully considered. The topic of opsonins was then taken up. This was followed by some remarks on precipitants.

THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.

Dr. F. C. Neal, of Peterborough, introduced this subject. He emphasized the great importance of an early diagnosis. Consider carefully all former illnesses, and the possibility of exposure to infection. The patient's condition of health should be carefully considered. Every indication of debility ought to be investigated. The usual symptoms and signs of cough, hemorrhage, pleurisy, hoarseness, and fever, should be searched for.

The physical examination of the patient was gone into fully. The test methods were also discussed, such as the tuberculin applied in various ways by von Pirquet, Calmette, etc.

THE FUNCTIONAL ACTIVITY OF THE HEART.

Dr. V. E. Henderson, Toronto, gave his paper on this. He went over the recent work that had been done on the heart and referred to his own. He called attention to the five properties of the heart muscle, namely, irritability, rhythmicity, contractility, conductivity, and tone. The various theories governing these were mentioned. Much attention was paid to the importance of tone and its bearing on the causation of murmurs. Disturbance in conductivity would cause such a condition as Stokes-Adams' syndrome.

CAUSE OF INCREASED HEART RATE IN FEVERS.

Dr. V. H. K. Moorhouse, Toronto, offered a contribution on this question. The increased temperature of the blood acted in two ways, locally on the heart and through the nervous system. Increased respiratory activity will lessen the quantity of carbon dioxide and accelerate the heart's action. There is no good reason for believing that toxins cause increased heart action, apart from the fever they give rise to, which has been already shown to stimulate the heart.

SERUM TREATMENT OF PNEUMONIA.

Dr. J. H. Duncan, of Chatham, gave his experiences with this treatment. He had employed Stearns' pneumolytic serum in thirty cases. The conclusions arrived at are: (1) The early use will produce prompt relief and almost certainly lead up to a rapid recovery; (2) that badly complicated cases will derive much benefit; (3) no bad results have been noted so far from the urticaria or rheumatic pains; (4) that the serum method of treating pneumonia is worthy a much more extensive trial than it has received.

CAUSATION OF BRONCHIAL BREATHING.

Dr. George S. Young, Toronto, read his contribution on this subject. Some remarks were made on vesicular breathing and its causes set out. Some held that it was merely a modified laryngeal sound; others that it was produced by a rush of air into the alveoli. In the case of bronchial theories of local causation they have not had much support. Highness or lowness of sound is due to the length of tube involved. The consolidation may not stop the tubes, and so the conductivity of the sound is increased. If the consolidation is complete no air passes along the tubes, but only over their openings. In this case an entirely different sound is heard.

SECTION OF GYNECOLOGY, OBSTETRICS AND PEDIATRICS—FORENOONS OF 31ST MAY AND JUNE 1ST.

POST PARTUM HEMORRHAGE.

Dr. Robert Ferguson, London, set out in his paper what was sometimes a very grave condition and would prove a tax upon the resources of the practitioner. There were two main causes, injuries during labor and failure of the uterus to contract. The latter might be caused by frequent child-bearing, syphilis, prolonged and deep anesthesia, non-use of ergot, over-stimulation of the uterus, and too much compression of it.

It is to a great extent a preventable condition. The causes point to the preventive measures likely to yield the best results. Any debility must be treated. Proper measures taken if syphilis be present. For the early pains of labor a hypodermic injection of morphia is much better than any other agent. As a stimulus

to the uterus quinine in solution is valuable. Another cause for hemorrhage is allowing a patient to become greatly exhausted by a long labor that should be terminated by proper assistance.

In the treatment of hemorrhage there should be made firm and steady manual pressure. A one per cent. hot iodine douche, vaginal or uterine, may be given. If hemorrhage still persists, a gauze packing may arrest. Forcible anteflexion of the fundus upon the cervix will at times succeed. Compression of the abdominal aorta above the level of the fundus.

DIAGNOSIS OF EXTRA-UTERINE PREGNANCY.

Dr. James A. MacLeod, of Buffalo, reported two very interesting cases. He went fully into the diagnosis of the condition. He held that it was impossible to distinguish the several varieties until the abdomen was opened. In classic cases the diagnosis was comparatively easy, but in irregular cases this was difficult. As the fetus grows the pain becomes more or less constant, the uterus is pushed over to the other side. If the fetus lives the conditions remain and increase. During the course of an extra-uterine pregnancy the endometrium is converted into a membrane that is shed when the extra-uterine fetus dies or is removed. The hemorrhage that takes place may vary greatly from a small to a fatal amount when rupture occurs.

In the diagnosis one must keep in mind appendicitis with abscess, salpingitis with abscess, as the two conditions that may give rise to most confusion. If there be a pelvic abscess the laboratory methods of settling the presence of pus should be had recourse to. In all cases of abscess the careful study of the history will throw much light on the true nature of the case.

In extra-uterine pregnancy the onset of the symptoms is very gradual. It is not likely to be confused with appendicitis or pelvic abscess until the occurrence of abortion. Following the hemorrhage, if marked in amount, the patient is in a state of collapse, with alteration in temperature and pulse due to shock. When the reaction sets in and the pulse becomes fuller and slower there may be distinct rise of temperature caused by the absorption of fibrin ferment. This may subside, or the pulse and temperature may remain above normal, when it is due to infection of the blood clot. On the death of the fetus the uterine discharges may acquire a distinct odor.

In endometritis there is cell infiltration, but this differs from the condition of the endometrium found when a pregnancy exists in a tube. The microscopic findings are of much value as an aid to a correct diagnosis.

When rupture and hemorrhage have occurred there will be a leucocytosis, which must not be confounded with that found where an abscess may exist. When a hemorrhage occurs in addition to the leucocytosis there is a marked decrease in the red corpuscles.

TREATMENT OF EXTRA-UTERINE PREGNANCY.

Dr. W. Krupp, of Woodstock, covered this topic carefully in his paper. He mentioned that ovarian pregnancy was a rare occurrence. Fertilization usually takes place in the tube. The cause for the non-passage of the ovum into the uterus is not fully settled. The ovum may die in the tube, causing a tubal mole. The causes of rupture are varied. The rupture may be intra-tubal or extra-tubal. The former is merely a rupture of the capsule enclosing the embryo. The extra-tubal variety may be intra or extra-peritoneal.

In cases of diagnosis before rupture an operation should be performed. In cases of rupture with bleeding and shock it may be necessary to wait an hour or more and give morphia per hypodermic method. As soon as shock abates, operate. The foot of the bedstead should be elevated and the arms and legs bandaged to keep blood in the vital organs. Strychnia gr. 1-40 may alleviate the shock. Adrenalin chloride 1 in 1,000 in doses of 20 to 30m. may be injected. Saline injections may have to be given.

In those cases where the shock and collapse is extreme to operate would be fatal. One must wait for reaction. By carrying out the foregoing treatment the crisis may be overcome.

In all cases where the shock has passed off the operation should be performed as soon as possible. The technique of the operation was briefly described.

INFANTILE ECZEMA.

Dr. Moorehouse, of London, read an exhaustive paper on this subject, in which he set out the treatment fully and gave a number of very useful formulae. Among the causes should be

mentioned the direct and exciting action of germs, the internal and constitutional, and those due to local irritants.

In the treatment attention must be given to remove all sources of local irritation. The local treatment must be carefully selected to suit each case, and the child must receive careful internal and hygienic treatment.

TORSION OF THE PEDICLE OF OVARIAN CYST.

Dr. E. R. Secord, Brantford, gave the history of an interesting case. The patient was pregnant and passed successfully through her accouchement. She was taken with severe pains. An operation was performed. There was a gangrenous condition of the bowel, and an artificial fecal fistula resulted. This later on cured by operation.

ECTOPIA VESICA.

Dr. J. B. Coleridge, of Ingersoll, reported a case of this condition and the details of the Peters operation The distal portion of the ureter, with a goodly rosette of bladder, was freed and implanted in the rectum. The patient did well. Dr. Coleridge paid a high tribute to the late Dr. Peters, whose genius had devised this operation.

SURGICAL TREATMENT OF INFANTILE PARALYSIS.

Dr. John R. Parry, of Hamilton, discussed this subject at considerable length. He gave in detail the best methods of dealing with these cases, both by mechanical appliances and by surgical intervention. The paper was one of much merit, and showed great care in its preparation. He pointed out that a very large measure of relief may be afforded these patients by well devised surgical treatment.

GENERAL SESSION, WEDNESDAY AFTERNOON, 31ST MAY.

At this session two very important addresses were delivered. One of these was by Dr. Crile, of Cleveland, and the other by Dr. Cullen, of Baltimore.

PHYLOGENETIC ASSOCIATION IN RELATION TO GRAVE'S DISEASE.

Dr. G. W. Crile, Cleveland, gave his paper on this subject. By phylogenesis is meant our tendencies and actions passed

down through the decades of our ancestors to us: perhaps the strongest of these is self-preservation and fear.

Grave's disease is a disease of the entire motor mechanism of the body. Our sensations and emotions are simply unexpressed motor mechanism, inasmuch as both emotion and motion cause the same metabolic and other physical phenomena.

Grave's disease is an expression of emotions as seen in rapid heart, tremor, nervous symptoms, bulging of eyes, etc., and is, therefore, motor activity. Man is essentially a motor being, he is essentially in action of some kind: bind a man so that he cannot move, and let him try his utmost to break the cords, and we get phenomena identical with that found in Grave's disease and from emotions as fear and anger. All emotions are the result of self-preservation. Fear is the strongest of these, and can be elicited only in animals with motor power to fight against enemies or run from them. Animals that cannot run away show no evidences of fear.

Fear produces the phenomena of excessive stimulation as expressed in rapid pulse, acceleration of heart, tremor, excessive internal secretions, rise of blood pressure, cold sweat, erection of hair, etc., and while this condition exists no part of the body can respond to any lesser stimulus.

At this time the digestive and procreative functions are inhibited: all other functions are increased; and those that are increased are all useful for protection; even the special senses are stimulated so as to be able more definitely and quickly to perceive danger. Those that are inhibited are useless as protectives, while those increased in function are our real preservatives. When we are under tension from fear and on the alert we get stimulation of muscle, blood pressure must go up to supply it, heart accelerates to supply the demand, pulse rate increases; a greater amount of muscle sugar is burnt up, and hence a call on the liver to produce glycogen and on the adrenals to raise blood pressure. Stimulation of preservative apparatus gives motion or emotion. We fear in heart, brain, and every other tissue of the body, and each is stimulated or inhibited according as it is a hindrance or assistance to self-protection. Hence the increase of strength noticed at time of excitement, with stage of weakness afterwards.

The same thing is seen in animals; they are frightened in all their organs. All forms of fear express themselves in similar terms and in similar phenomena. Fear in an animal means trying to escape, *e.g.,* rabbit; anger in an animal stimulates fight, *e.g.,* rat. Animals that have no power for attacking an enemy experience no anger; animals having no power to run experience no fear. In all stages of life difference of opinion leads to argument, this to fight even unto death.

The human being is in a continual state of auto-captivity; in spite of all the training a child gets at home, at school, at Sunday school, and elsewhere, his tendency is against this training, or why should training be necessary at all. Owing to this auto-captivity we are made to express our actions by emotions. Our forefathers had an impulse and acted upon it; we have impulses and have to restrain them owing to the laws of our auto-captivity. A soldier waiting for orders to attack an enemy suffers more than when in action under fire. Action relieves the emotions. When we get emotions and do not act we are more hurt by the excessive stimulation and production of the internal organs.

Experiments on the brain cells of rabbits that run from an enemy, and on dogs that fought an enemy, showed much greater physical exhaustion and changes in those of the rabbit. Emotion is stimulation for action.

In Grave's disease we get a history of strong emotions: enough stimulus to keep the patient awake during the night and to keep his attention during the day. Symptoms of Grave's disease follow any emotion, kept up for a certain length of time: a typical case of Grave's disease develops in a man who had lost his fortune and *worried* greatly over it. Another case in a young woman who was disappointed in love: how could this cause the disease? By theory of emotion instead of action, *e.g.,* heightened pulse, blush, etc., and the addition of worry. Marriage has been known to cure Grave's disease. Emotions in this disease are very acute.

Phenomena are always the same, no matter what the cause of fear is. We cannot find typical Grave's disease in animals, but we can often see some of the more prominent symptoms. When

our ancestors were unrestrained there was no Grave's disease among them, because they got action for their emotions instead of repression.

Increase of heart beat, heightened pulse, increased pallor, protrusion of eyeballs, loss of weight, tremor, etc., are all produced in animals during great fear. The increase of adrenalin in fear is for the purpose of raising the blood pressure to drive blood into the contracted muscles, increase of glycogen in fear is for the purpose of oxidation so as to give power to the body for physical action. Adrenalin is found increased in fear and Grave's disease. Glycogen. Blood-pressure increased in both. Tremors, digestive disturbances, higher susceptibility to stimuli, and brain cells show marked physical change in both. There are no changes in cells of the spinal cord in either, because the spinal cord has no associated membrane (association fibres), while the brain is made up of it.

In Graves' disease, if the thyroid is decreased in size from any cause, the symptoms diminish. Therefore the thyroid has something to do with the disease. Again, if thyroid extract is fed to an individual in large doses, we get most of the symptoms of Graves' disease, and then if we withhold these doses the symptoms may disappear.

Too little thyroid secretion either abolishes or lessens both activity and emotions.

Tie off the blood supply of the thyroid, remove it, or give the patient rest and the symptoms diminish. Fear shows psychic shock, which is identical in results with physical shock. The fear of an operation gives same condition of shock as does the operation itself.

In Grave's disease there seems to be a pathological chain of reciprocal action between the brain and the thyroid; break the chain anywhere and improvement follows.

When we give the patient and the brain rest, the thyroid diminishes in the same proportion as the symptoms disappear.

The mechanism expressing motor function is the same as that expressing emotion; our progenitors gave action to stimuli; we withhold it and get not action, but reaction. Rest to brain, or remove the thyroid, are the recognized forms of treatment.

SURGICAL DISEASES OF THE UMBILICUS.

Dr. Thomas Cullen, Associate Professor of Johns Hopkins, Baltimore, gave an address on this topic with notes from a series of lantern slides.

The commonest disease of the umbilicus, namely, umbilical hernia, is quite easily recognized and requires the usual operative procedure for ventral hernia.

Among the rarer conditions are: (1) Abscess formation, below the umbilicus and extra-peritoneal, simply a collection of pus in the abdominal wall, which necessitates only a superficial incision without going through the peritoneum. (2) Diseases of the umbilico-mesenteric duct. This duct may not become entirely obliterated, and hence may give cysts or concretions in the abdominal wall, if not obliterated in the centre; if the outer part remains open, it, being lined with intestinal epithelium, and showing the typical glands of Lieberkuhn, keeps continually pouring a secretion on the abdominal wall. It appears on the abdominal wall as a little red nodule or cyst. One such of these poured out gastric juice, and on microscopical examination proved to be lined by mucous membrane identical with the mucosa of the stomach.

There are four cases of these cystic nodules described in the literature occurring in women, which increased in size during menstruation and also during pregnancy. Microscopical examination of one of them showed it to consist of typical uterine mucosa.

When the inner part of the duct remains patent we get a Meckel's diverticulum attached to the abdominal wall. One should be careful in operating here as there is a danger of cutting the diverticulum and intestinal obstruction following. Treat it in the same way as an appendix, by cutting off and putting in a purse-string suture.

(3) Umbilical concretions have been known, and there are two or three cases of cysts of the sweat glands of the umbilicus on record. There is also described one case of Paget's disease of the umbilicus identical with Paget's disease of the nipple.

(4) Malignant growths. Primary or secondary. Primary may be either squamous epithelial in origin or glandular from the remains of the old duct. Either of these is very rare.

Secondary, however, is not so uncommon and is usually from stomach, gall-bladder, intestine, uterus or ovary. It may come from stomach or gall-bladder, via the liver and falciform ligament or ligamentum teres; direct by the stomach being in apposition to the umbilicus, or by way of the mesentery. When secondary from the pelvic organs it travels by way of the urachus.

(5) Diseases caused from the urachus. This duct may remain patent or may be obliterated only in places, so that we get all the diseases common to a duct of this nature: Small cysts at various points along its course are fairly common; there is one case on record of a stone being found in the urachus; there are quite a few cases of patent urachus that discharged urine at the umbilicus as well as from the external genitals. We may get an infection of a patent urachus; there was one case cited in which a patient consulted the speaker, complaining of a hard, board-like abdomen in the middle line, just above the symphisis pubes; operation showed it to be due to an inflammatory thickening following an infection of the urachus; after removal the abdomen became as soft and flaccid as normal.

(6) Infections of the umbilicus. These are fairly common and may be from almost any germ. It must be specially borne in mind that in cases of puerperal septicemia the umbilicus of the babe is very liable to the same infection. Several cases have been noted where babies have died from septicemia which gave the same organisms as were found in the puerperal septicemia of the mother.

Section of Preventive Medicine.

Thursday forenoon, 1st June.

Greater attention to the preservation and care of children was urged by several speakers at the Ontario Medical Association meeting. "Governments apparently forget that children are the greatest asset any country can have," said Dr. J. W. S. McCullough, Secretary of the Provincial Board of Health. He remembered that while both Federal and Provincial Governments encourage immigration, even paying $5 per head to those bringing in immigrants, a mother who brings a native-born child into the country is given nothing at all. "We hear a great deal," said he, "about race suicide and the duty of raising families, but not

much help is offered to the mother.'' He advocated giving her a small sum when the child reaches five years.

The deaths from digestive diseases furnish a wider problem than epidemic diseases, said Dr. McCullough. The feeding of children, in which milk is the chief element, is thus of dominating importance. Dr. J. H. Mullin, of Hamilton, described the system by which Hamilton, at a cost of more than $1,000 a year, supplies modified milk for infants, greatly reducing the mortality.

The mortality of infants is almost double that of persons from every form of tuberculosis, said Dr. John Phillips, associate Professor of Medicine, Western Reserve University, Cleveland. For the most part this mortality could be prevented, the two great causes being poverty and ignorance.

Dr. Phillips described the elaborate measures adopted successfully in Cleveland to lower infant mortality and to care for the children.

Slow sand filtration, followed by treatment with chlorine, was advocated by Dr. J. A. Amyot, of Toronto, as the best method of obtaining a pure water supply.

Dr. Amyot said chlorine was not injurious to man. Other explanations were found for the harm done to plants. In this connection Dr. Francis E. Fronczak, Health Commissioner of Buffalo, explained that the chlorine combines chemically with the chlorophyll in the plants, thus causing the plants to die, but being vegetable, it did not form a chemical combination in the human organism.

Dr. Amyot complimented the men who had to deal with the water situation in Toronto. While the ''raw'' water reaching the intake was worse this year than it had been for years, yet there was a lower typhoid rate than for years. This was due to the backbone of the men in charge, who in spite of all protests had gone on with the chlorination, even increasing the dose—but they had saved the city from a far worse visitation of typhoid.

Dr. Fronczak said the odor and taste of chlorine-treated water could be removed by ''cascading,'' as tried at Marseilles, or by storing for some time after disinfection. He strongly urged the formation of an International Commission to study

the conditions and to furnish a pure water supply for the whole Niagara district, where typhoid was almost endemic, for there was no use in one community adopting sanitary measures while others continued to pollute the same river and lake.

Dr. Helen MacMurchy read a carefully prepared paper on medical inspection of schools; a helpful address on surgery was given by Dr. A. E. Garrow, Assistant Professor of Surgery in McGill University, Montreal, and the so-called "infantile paralysis" was dealt with in two important papers read by Dr. Robert Parry and Dr. John Parry, of Hamilton.

SECTION OF EYE, EAR, NOSE, AND THROAT, WEDNESDAY FORENOON, 31ST MAY.

This was a very busy section and got through a number of papers of marked ability.

PREVENTION OF BLINDNESS.

Dr. Thomas A. Woodruff, of Chicago, handled this topic with clearness. He dwelt at length on the value of prevention. He discussed blindness and injuries to the eyes in industrial diseases, and the best methods of preventing these. He then took up wood alcohol and its effects on vision. His next topic was trachoma. He directed attention to its increase in the United States. Lastly he spoke of ophthalmia neonatorium. The child's eyes may be infected in utero, during labor, or just after birth. In the treatment he gave the first place to nitrate of silver. He then emphasized the value of preventive measures as laid down by Riedé many years ago.

HEADACHES FROM HETEROPHORIA.

This was the title of Dr. G. Sterling Ryerson's paper. He pointed out the cause and symptoms of headache from this condition, such as the pains, nausea and vomiting.

This paper was discussed by Dr. C. Campbell, Toronto, Dr. Norman Price, Niagara; T. A. Woodruff, Chicago, and Dr. Reeve, Toronto, all laying stress on the suffering this condition could produce.

NASAL ACCESSORY SINUSES.

Dr. Lee M. Hurd, of New York, dwelt on the different methods of treatment. He discussed the acute and chronic inflamma-

tions. He related the best methods of dealing with disease in these sinuses. The paper was replete with information supplemented from the writer's own wide experience.

EQUILIBRIUM TESTS.

Dr. J. P. Martin, of Hamilton, took up the various means of testing equilibrium. He went fully into the causes of loss of equilibrium. The tests as used in Prof. Brucht's clinic in Berlin were given. These tests are known as rotation tests, caloric tests, pressure tests, static tests, galvanic tests. The various morbid conditions of the ear that cause loss of equilibrium were taken up.

OTITIS MEDIA PURULENTA CHRONICA.

Such was the title of Dr. Price-Brown's paper. Attention was invited to the teachings of many that this condition, where there are no complications, can be cured by treatment through the natural passages. In cases of marginal perforation an operation is almost certain to be required. Proper treatment must be given to the adenoids and faucial tonsils. Irrigation with warm boracic lotion, and then applying pure glycerine, is helpful in many cases. Alcohol of 95 per cent. may cure some cases.

SUCCESS IN CATARACT OPERATIONS.

Dr. W. M. Brown, of Neustadt, Ont., pointed out that these operations called for skill and nerve. The following points should be observed: Wash with soap and water, wash with sulphuric ether, wash with bichloride (1-4,000), evert the lids and wash with bi-chloride (1-4,000), add 1 drop eserine (1 per cent. solution), half-hour before, and repeat 15 minutes before operation, 3 drops cocaine, 4 per cent. at intervals of two minutes for five times before operation, boil instruments, put them in alcohol then in carbolic solution 1 per cent., use lint out of bichloride 1 in 4,000, withdraw the knife slowly. The knife must be very sharp.

THE BANQUET.

The banquet on Wednesday evening, in the Clifton House, was a marked success. The gathering was addressed by Hon. Justice W. R. Riddell, of Toronto, who took as his subject "The History of the Medical Profession in Upper Canada."

Speeches were also made by Dr. Roswell Park, Buffalo, Mr. I. H. Cameron, Toronto, and Dr. James Samson, of Windsor.

A resolution was moved by Dr. J. H. Elliott and seconded by Dr. H. M. Parsons, that all general hospitals should make provision for the care of tuberculous patients, or have the government grant withheld. This was approved of by the meeting.

There was no grant made to the library this year.

There were a number of other pleasant features of the meeting, such as an outing to Dr. Grant's place up the river beyond Dufferin's Island. There was the Maid of the Mist trip, which many took in and enjoyed. The Golf Club threw open their club and grounds to the members of the Association.

The local committee had worked hard, and with the result that the meeting was a very successful affair. The Niagara Falls medical men won for themselves the highest praise for their efforts to make the gathering both profitable and pleasant, for it certainly was both.

There were about 250 delegates present from all parts of Ontario and some 50 visitors from other provinces or the United States. The programme was unusually interesting. Many very valuable papers were contributed by the members from Ontario, as well as some guests from the United States.

The meeting will be held next year in Toronto. The following officers were elected: President, Dr. Herbert A. Bruce, of Toronto; First Vice-President, Dr. F. W. E. Wilson, Niagara Falls, Ontario; Second Vice-President, Dr. Wm. Hall, Brampton; Third Vice-President, Dr. F. Drake, London; Fourth Vice-President, Dr. George Field, Cobourg; General Secretary, Dr. F. A. Clarkson, Toronto; Treasurer, Dr. J. Heurner Mullin, Hamilton.

Canadian Journal of Medicine and Surgery

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Pharmacology and Therapeutics:
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Pediatrics:
Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto.

Medicine:
J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:
Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:
J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:
N. H. Beemer, M.D., Mimico Insane Asylum. Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:
Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:
W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. MacKenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:
J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:
Perry G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Dermatology:
D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

SIR WILLIAM OSLER, BARONET.

JUST as we go to press, we learn that our distinguished *confrere* and fellow-countryman, Dr. William Osler, Regius Professor of Medicine, Oxford University, has received kingly honors at the hands of His Majesty, in the form of a Baronetcy. No man of science more richly deserves such a title. Dr. Osler has always stood for everything that is highest in our profession, and has been an inspiration to higher ideals in medicine, not only in Canada, but throughout the world. We congratulate Sir William Osler upon the greatness he has achieved, and wish him yet many years to enjoy his title. W. A. Y.

UNUSUAL RESULTS IN INFECTIOUS PAROTITIS (MUMPS).

RECENTLY two men were under our treatment for mumps at the same time, and in both cases the tumor was incised with advantage. One patient, a man of twenty-one years of age, had been ill for a week before applying for advice. He would have come sooner, only he had been told by friends that the swelling on the right side of his face and neck was due to the eruption of a wisdom tooth. The symptoms were: stiffness of the angle of the jaw, swelling of the paro-

tid and submaxillary glands on the right side of the face and neck, pain increased by moving the jaws, or opening the mouth, with edema of the affected parts, the skin being reddened. The tonsils were not affected.

Poulticing with antiphlogistine for six days was tried. Slight fluctuation having been felt in the region of the submaxillary gland, an incision was made. A considerable quantity of blood escaped, but no pus appeared. The swelling in the region of the submaxillary gland disappeared in a few days, but the parotid gland continued swollen. Subsequently, one end of the incision was enlarged upwards, and the parotid abscess discharged freely.

The second patient, a man of forty-six years of age, was seen on the fifth day of the disease. The symptoms of local distress in his case were marked. Considerable relief of pain was got from the application of emplastrum belladonnae to the tumor; Dover's powder was administered at night. On the ninth day, fluctuation was felt, and an anesthetic having been given, an incision was made in the region of the submaxillary gland, through the skin, cellular tissue and platysma myoides. A considerable quantity of blood and some pus escaped. Irrigation of the wound once a day with a warm solution of boric acid was used for five days. The wound closed in fourteen days. There can be no doubt that an incision was beneficial in both these cases, and that the removal of blood and the products of inflammation from the swollen parts was effected promptly, more promptly than by waiting

for the slower effects of blisters and iodide of potassium. J. J. C.

ONTARIO STATISTICS REFERRING TO APPENDICITIS.

THE following table, compiled from the Registrar-General's reports of deaths in Ontario, shows the figures from which statistics regarding appendicitis occurring during the pre-operation period have been drawn:

STATISTICS FROM REGISTRAR-GENERAL'S REPORTS RE DEATHS IN ONTARIO.

Year	Abscess	Inflammation	Ileus	Colica	Entero-Colitis	Enteritis	Peritonitis	Ulcer. of Intestine	Perfor. of Intestine
1880	84	249	1	—	—	408	137	40	—
1881	87	224	—	—	—	465	155	42	—
1882	—	—	—	3	—	471	140	9	5
1883	2	—	—	6	2	442	133	7	1
1884	—	—	1	4	2	512	145	13	5
1885	—	—	—	3	13	485	166	40	—
1886	—	—	—	12	—	516	127	15	—
						Enteritis & Gastritis	Not Mentioned.		
1887	—	—	—	—	—	854		—	—
1888	—	—	—	—	—	909		—	—
1889	—	—	—	—	—	831		—	—
1890	—	—	—	—	—	764		—	—

It will be noticed that in the years 1880-1881, a large number of deaths were recorded under the general heading, "Abscess," and also "Inflammation," not indicating location, some of which may possibly

have been deaths from appendicitis. During the next five years, there is a much greater division, and everything has been included which could have any bearing on the subject of appendicitis. From that date on for four years, it will be noticed that all these headings, with one exception, Enteritis, have been dropped, and everything appears to have been included under the double heading, Enteritis and Gastritis, even Peritonitis not being mentioned.

Would it be quite fair, under these circumstances, we ask, to take the figures for peritonitis for the years 1884-5-6, adding thereto the five deaths from Perforation of the Intestine in 1884, and adopt the average thus obtained as the mortality from appendicitis in Ontario during those three years?

Appendicitis was not mentioned in the Registrar-General's reports during the ten year period given above. It was after 1896 that the combined terms—iliac abscess, typhlitis, perityphlitis, appendicitis were introduced to designate this disease. In 1907 it was defined by the Registrar-General as appendicitis, the other qualifying terms being abandoned. Would it not be well to begin our calculations of the mortality of appendicitis in Ontario in 1907, or at furthest in 1897?

If we adopt the latter date—at the dawn of the correct nomenclature of the disease whose frequency we are investigating, should we not be satisfied with recording deaths from iliac abscess, typhlitis, perityphlitis, appendicitis, not including in the estimate deaths from peritonitis, other than puerperal peri-

tonitis? True, appendicitis is the most frequent cause of local peritonitis in the male, but inflammation about the uterus and Fallopian tubes frequently results from non-puerperal causes, viz., gonorrhea, tuberculosis. The list of causes of peritonitis, other than appendicitis, is a long one—cancer, Bright's disease, typhoid fever, gout, arterio-sclerosis, traumatism, perforation of gastric and duodenal ulcers, etc., etc. J. J. C.

APPENDICITIS DISCUSSED AT THE MEETING OF THE ONTARIO MEDICAL ASSOCIATION.

QUITE a lively discussion on appendicitis marked the opening session of the thirtieth annual meeting of the Ontario Medical Association, May 30th, 1911, at Niagara Falls. Opinions varied, the contestants naturally dividing according to the lines of professional cleavage. Hence, surgeons favored operative procedures and physicians advocated medical treatment. Dr. Cruickshank, Windsor, Ont., who spoke scathingly against operative treatment, rather inconsistently admitted, that if attacked he would have his own appendix removed. Dr. R. D. Rudolf, Toronto, read an elaborate paper on the medical treatment, quoting statistics from a number of eminent authorities, showing the beneficent results of medical treatment, and that the death rate in England had increased since surgical treatment had been adopted, but finally concluded by declaring in favor of a somewhat general operative treatment. Dr. John Hunter,

Toronto, took the medical side, but, in addition, claimed that physicians should prepare patients for operation, and take full charge immediately after the surgical operation. Dr. H. A. Bruce, Toronto, read a paper on the surgical treatment, concluding that an immediate operation should be done in every case. Dr. Primrose, Toronto; Dr. Howitt, Guelph; Dr. Olmsted, Niagara Falls South, and Dr. Williams, discussed the technique of the operation for appendicitis.

J. J. C.

INEBRIETY IN ONTARIO.

At page 1 we publish a paper by Drs. A. M. Rosebrugh and R. H. Coleman, who are interested in the reclamation, through medical treatment, of inebriates. These gentlemen are well and favorably known in connection with this work, and anything they have to say to the medical profession about it is deserving of an attentive consideration.

It is true that there is a steady falling off in the use of liquor in Canada, the consumption per capita being far below that in Great Britain and most other English-speaking countries. Obviously, the diminishing consumption of alcohol cannot be due to hard times; for the lavish expenditure of borrowed capital in Canada at the present time enables every man who is willing to toil to get remunerative employment. Many men, who have sense enough to earn money, are not spending it in drink, although it is quite likely

that their surplus cash goes in luxuries of other kinds —good, bad and indifferent. For the credit of the nation, it is to be hoped that the number of the non-alcoholic sports may be increased and the consumption of alcohol still further reduced. Until that happy day dawns, there will be work for doctors to do in helping to reclaim the drunkards.

J. J. C.

THE ONTARIO MEDICAL ASSOCIATION.

Few places on this continent fascinate and call back again with a charm that cannot be denied like the Falls of Niagara. So the choice of a meeting place was a fortunate one for the Ontario Medical Association of nineteen hundred and eleven. We have so often piped to the tune of making our Canadian meeting a pleasure and a privilege, demanding loyal attendance, and yet so few have danced, and the contrast in enthusiasm between the members of the American Medical Association and our own are so marked that we hesitate to draw any further on our stock of comparisons. The Ontario members turned out to the number of about two hundred, with fifty visitors.

Several parties motored over from Toronto, and the number might have been enlarged by a few more had sundry carburetors, spark plugs, etc., played their part as they should have done. There are some stories by the wayside to which only language neither elegant nor graceful does simple justice.

The programme of the meeting was a splendid one, interesting and practical. The greatest credit is due to the local committee for their care in preparing such an excellent programme, and for the courtesy they extended to members and guests. There were, in all, five sessions, dividing up as usual into different sections devoted to papers on medicine, surgery, preventive medicine, military sanitation, obstetrics and gynecology, and ear, eye, nose and throat. A detailed report of the proceedings will be found in another part of this issue. At the banquet, among the distinguished guests who interested the members, was the Hon. Justice Riddell. He gave an excellent address on "The History of the Medical Profession in Upper Canada."

"The Bird of Time has but a little way to flutter," and next June Toronto will be welcoming the Association under the presidency of Dr. Herbert Bruce.

W. A. Y.

THE CANADIAN MEDICAL ASSOCIATION.

We regret that, owing to lack of space, it is impossible for us to publish this month an account of the meeting of the Canadian Medical Association, which took place in Montreal on June 7th, 8th and 9th. We, however, can promise our readers a full report a month hence.

The attendance was fairly good, though it must be remembered that this was largely due to the McGill University Reunion. Apart from those who attended

for this reason, only about 250 members of the Association registered and paid their fees. The profession regret the sudden illness at the meeting of the President, Dr. Armstrong, and are glad to know, at the date of writing, that he is recovering his wonted health. The entertainment of the visitors was well looked after, all of the committees having done their part to make the meeting of 1911 a success.

W. A. Y.

PERSONALS

Dr. E. C. Burson has removed to 110 St. Clair Avenue West.

Selected Articles

GAS AS AN AID TO VENTILATION

An interesting series of experiments which I have made shows conclusively that, taking an ordinary dwelling room lighted by gas and then the same room lighted by electricity, the air of the lower portion of the room, if one or two people only are present, is as pure with gas lighting as with electric lighting; while if a large number are present the advantages are enormously in favor of gas—the air with electric lighting becoming rapidly so organically impure as to be positively dangerous to health.

Distribution of Carbon Dioxide in the Air of a Dwelling Room (Capacity 2,700 cubic feet) with Gas and Electric Incandescent Lighting:

GAS LIGHTING.

Two Welsbach "C" burners (on pendant), each consuming four cubic feet of gas per hour, and giving 140 candles.

	Carbon Dioxide Parts per 10,000.	Temperature Deg. Fahr.
Outside air	0.03	61.0
Between joists	0.06	66.0
Ceiling level	0.44	74.7
Breathing level	0.05	63.0

ELECTRIC LIGHTING.

Three 16-candle power Incandescent Lamps.

	Carbon Dioxide Parts per 10,000.	Temperature Deg. Fahr.
Outside air	0.03	61.0
Between joists	0.04	61.5
Ceiling level	0.09	62.5
Breathing level	0.06	61.7

If a number of people are in a room, the organic exhalations, as well as the carbon dioxide and water vapor evolved during respiration rise, and, reaching the level of the gas burners, are rapidly swept up to the ceiling by the rush of hot gas from the burner—the flame and heat destroying and charring a large proportion of the germs. The hot air reaches the ceiling and diffuses through the plaster and walls in the upper part of the room; and in doing so the charred organic matter is left behind, filtered off on the surface of the plaster, and rapidly causes that discoloration of the ceiling which is invariably found in a town atmosphere above the gas burner, and which is often wanting with country air. That this is the case is amply verified by the fact that if beams are present at the back of the plaster, diffusion is prevented at these points, and their position is plainly mapped out on the discolored surface.

When the room with its occupants was lighted by electric light, there was no rapid uprush in this way of the products to the ceiling; and the organic impurities and carbon dioxide leaving at body temperature remained diffused throughout the whole of the atmosphere of the room, causing a far more rapid fouling of the air and injury to health. If such a room were entirely left for its ventilation to diffusion through the walls, it would soon acquire that sour smell which is noticeable in many rooms of the poor, in which, in order to keep in the warmth derived from their own bodies, all ventilation is cut off. This smell is due to the decomposition of organic matter filtered off during diffusion by the wall surface, and undergoing putrefactive decay, giving the offensive odor, the only way to get rid of which is to strip the paper from the walls and lime-wash them, as well as the ceiling. Then, and then only, does the smell pass away.

When however, this same diffusion through the ceiling and upper part of the walls of the room takes place in a gas-lighted room, this unpleasant human smell, so characteristic of the "tube" railways, is never detected, as the small quantity of sulphur compounds present in the gas (as was shown by researches of Mr. Otto Hehner and Dr. Rideal) is largely absorbed and fixed by the lime and lime salts present, and acts as a disinfectant, destroying all forms of germ life. Here, again, the hygienic superiority of gas is manifest, as in a gas-lighted room or hall not only are the germs present in the air, and often of an infec-

tious character, destroyed and burnt up by the flame itself, but also undergo destruction and disinfection from the trace of sulphur dioxide present in the products of combustion—an action which is entirely wanting when the illumination is due to incandescent electric light.

An interesting point also brought out by experiments I have made is that it is really the position of the gas light above the level of the head in the chandelier which causes this hygienic advantage, and that if the gas is burning in table-lamps the cooling of the products in their passage up to the ceiling largely does away with the ceiling action, and the air of the room may become as foul as when it is unlit or lighted by electric light.—*Exchange.*

THE SUPRARENAL SITUATION.

THE UNITED STATES CIRCUIT COURT UPHOLDS PRODUCT PATENT ON THE NATURAL ACTIVE PRINCIPLE.

When Vulpian, a French chemist, in 1856 reported that the suprarenal glands of mammals contained a peculiar substance, giving certain color reactions with ferric chloride, iodine and alkalies, and quickly changing in contact with the air and on exposure to light, little might anyone have expected that fifty-five years later this peculiar substance would be the subject of a product patent.

In 1904 the H. K. Mulford Company placed upon the market Adrin, its brand of Epinephrine, the active principle of the adrenal gland, believing that the pioneer work done by Von Fürth and Abel justified it in doing so—and that a product patent on the active principle existing in nature could not possibly be upheld, particularly in view of the fact that its existence had been recognized for fifty years; that nearly all of its chemical reactions and properties were previously known and described; that its chemical nature had been accurately predicted; that its medicinal virtues had been discovered and put into practical use; and that it had been actually isolated in various degrees of purity in the form of a benzoylated derivative and in the form of a zinc and an iron compound.

The H. K. Mulford Company regarded its product as a substantially different product, obtained by a substantially different process, from those specified in the Takamine patent and did not believe that the latter could—if held valid at all—be construed to cover and include the Mulford product.

Moreover, the H. K. Mulford Company, recognizing that the first object of the patent law is to "promote progress in the Sciences and Arts," believed and still believes that the granting of *Product Patents* on medicinal substances, whether or not they exist preformed in nature, are a hindrance to, rather than a means of promoting progress in the practice of medicine, and used their efforts to defeat a product patent, which it deemed to be not only contrary to the object and spirit of the patent law, but contrary to the best interests of Pharmacologic Practice in the United States.

On April 29, 1911, Judge Hand, in the United States Circuit Court for the Southern District of New York, handed down a decision sustaining certain of the patent claims of Dr. Takamine and declaring H. K. Mulford Company products to infringe these claims.

The H. K. Mulford Company wishes to call attention to the fact that in defending these suits it has consistently and at a great cost endeavored to uphold its antagonistic position toward the product patent for medicinal substances, believing that product patents on all substances used in medicine, work an injustice on the medical and pharmaceutical professions, and are inimical to the public good.

The Court having decided that the manufacture of Adrin, the Mulford brand of epinephrine (the active principle of the adrenal glands) conflicts with the product patents granted to Takamine, the H. K. Mulford Company will discontinue its manufacture in the form of solution, tablets and hypodermics, until their appeal is decided in the higher court. Other preparations which have contained the Adrin brand of epinephrine will be prepared with an amount of purified extract of adrenals equivalent to the active principle contained in the glands.

Lynhurst Private Hospital, 570 Spadina Ave., Toronto. This institution was formally opened to the profession on June 1st under the management of a most capable superintendent, Mrs. Maude Horner, a 1902 graduate of Montreal General Hospital. For nearly nine years Mrs. Horner has held practically nothing but superintendents' positions, her charges having varied from 40 to 100 beds. Lynhurst Private Hospital affords excellent facilities for the care of medical, surgical and nervous patients under the treatment of their own physician.

A PALATABLE VEHICLE *

As a palatable vehicle for the administration of medicine, Smith's Grape Juice, as bottled at Winona, Ontario, will be found a valuable aid to the practitioner of medicine. The active properties of some therapeutic agents are weakened or destroyed when administered in an alcoholic vehicle. Many persons who cannot take cod liver oil, can take without difficulty olive oil in grape juice, in the proportion of two ounces of grape juice to one ounce of olive oil, and take at once. The sedentary worker, who, when overtaxed, gets "brain fag," will find Smith's Grape Juice, besides being a delicious drink, the best of all tonics. It is most refreshing and invigorating. It stimulates without any reaction whatever, because it is a natural tonic of both dietetic and medicinal value. For children with weak digestion it is splendid, combining its tonic qualities with deliciousness as a drink. Smith's Grape Juice is an ideal summer drink, neither sweet nor sour. It is a refrigerant, cooling the blood because of the little effort required for its absorption.

*Publisher's Department.

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Original Contributions

INFLAMMATORY TUMORS OF THE ABDOMEN SIMULATING MALIGNANT DISEASE*

BY HERBERT A. BRUCE, M.D., F.R.C.S. (ENG.), TORONTO.

Associate Professor of Clinical Surgery, University of Toronto; Surgeon to the Toronto General Hospital.

Having from time to time met with cases in which tumors of the abdomen were assumed to be malignant, and a grave prognosis accordingly given, and in which subsequent microscopic examination proved them to be of inflammatory origin, I thought it would be interesting to report some of these cases, and to call attention to the difficulty of distinguishing clinically between such inflammatory masses and malignant disease.

Inflammatory conditions simulating malignant disease may occur in the sigmoid, rectum, cecum and colon, and lead to obstructive symptoms calling for operation.

CASE 1.—Mrs. P., aged 45, sent into the Toronto General Hospital under my care on December 15, 1909, by Dr. Fish.

She had been suffering for the previous six or seven weeks from pain in the abdomen of a colicky character, mostly referred to the left iliac region. This had been so severe at times as to necessitate the administration of morphia. There had been on a few occasions a slight elevation of temperature and increase in

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pulse rate. She had lost 20 lbs. in weight during the previous three months, and marked constipation had been present.

On vaginal examination a mass could be felt on the left side of the uterus, extending from the uterus and upper part of the vagina to the left pelvic wall. The uterus was pushed over to the right side, and could be moved quite freely antero-posteriorly. The mass was very hard, tender and ill-defined. The right tube and ovary were normal.

Diagnosis.—We thought it probably an inflammatory mass, connected with a pus tube, although we could get no history of a vaginal discharge. The hard consistence of the mass and the likelihood of its involving the upper part of the rectum suggested the possibility of a malignant growth.

At the operation the sigmoid flexure was found to be involved in the mass on the left side of the uterus. In fact the sigmoid formed a loop in the pelvis, being adherent below to the vaginal wall and left side of the uterus, and having attached to it in front the Fallopian tube and ovary. With some difficulty the sigmoid was separated from its attachments below, and its wall found to be very greatly thickened, the lumen being reduced to the size of a goose-quill. The mass was two and a half inches in vertical extent, very hard, completely surrounded the gut, and was thought to be malignant. The Fallopian tube was distended with pus, and the ovary also contained an abscess. Both the tube and ovary were removed.

As her chief symptoms were those of obstruction it was quite clear that—whether the growth was malignant or not—resection of the sigmoid would have to be done in order to give her relief, and this was accordingly proceeded with, four inches of the sigmoid being removed and an end to end anastomosis made. Drainage was provided through the vagina. She made a good recovery, and is at present enjoying good health.

Dr. O. R. Mabee, who made a microscopic section of the mass, reported it to be inflammatory. His report is as follows:

"The thickened portion of the sigmoid is firm in consistence, 6¼ centimeters in length and 5 centimeters in diameter. On transverse section its lumen is almost occluded, measuring only 0.5 centimeters in diameter. The thickened intestinal wall measures 2.25 cm. in thickness. External to the muscular layer is a band of dense firm greyish white tissue, which measures 1.5

centimeters in thickness. Adherent to this is a fairly large amount of adipose tissue, occurring in irregular masses. On one of the surfaces there are several fibrous tags, evidently the remains of fibrous adhesions.

"Microscopical examination was made of transverse sections through the thickened wall. The mucous membrane is thrown up into irregular folds, and is apparently normal. The submucosa contains irregularly scattered foci of small mononuclear lymphocytes closely related to its blood vessels, and there is a

Cross section, thickened sigmoid. (Case 1.)

moderate increase in connective tissue throughout. The bundles of circular muscles in some areas are separated by edema, and there are a few areas where there is infiltration by small mononuclear lymphocytes and an increase in connective tissue. The longitudinal muscle shows areas where the muscle bundles have been replaced by dense connective tissue, and there are several foci of infiltration by small mononuclear lymphocytes. Surrounding the muscular layer is a band of dense connective tissue cells in which numerous blood vessels are present. In some places this dips into the muscular layer, and it shows an occasional collection of small mononuclear lymphocytes."

The condition is one of chronic perisigmoiditis, evidently due to extension of inflammation from the Fallopian tube.

Case 2.—Mrs. G., aged 62. Admitted under my care into

St. Michael's Hospital in October, 1900, suffering from chronic obstruction.

On vaginal examination a lump could be felt on the left side of the uterus, and at operation a growth was found involving the lower end of the sigmoid. It was annular and about two and a half inches in vertical extent, and attached to the uterus. About four inches of the bowel were resected, and an end to end anastomosis made.

At the time of operation the growth was supposed to be malignant, but subsequent section proved it to be inflammatory.

This was evidently a case of chronic interstitial colitis or sigmoiditis.

Case 3.—Mr. W., aged 39. Twelve years ago he had an attack of appendicitis, which confined him to bed for two days. During the previous year he had suffered from flatulence, and occasionally slight colicky pains. Six months ago he had a slight attack of abdominal pain of a colicky character, which kept him in the house for a couple of days, and at that time a considerable mass could be felt in the left hypochondriac region, which was somewhat tender to the touch.

Until recently, however, he had never been troubled with constipation; in fact his bowels had always moved normally, and he had practically never required a purgative. For the previous three weeks he had suffered from colicky pains in the abdomen and chronic constipation. A few days prior to operation he took a large dose of salts, followed in three hours by castor oil, and two or three hours later suffered from severe colicky pains in the abdomen, with vomiting, and only a slight movement. In this last attack his temperature went up to 102° and his pulse to 100, and there was considerable distension of the abdomen, with rigidity over the mass on the left side and some rigidity of the right rectus.

On opening the abdomen in the left linea semi-lunaris over the lump, the omentum was found rolled up into a large mass, extending across the upper part of the abdomen. It was adherent to the parietal peritoneum in front, and also attached firmly to the descending colon just below the splenic flexure, and continuous with a very large mass involving the colon and surrounding it over an area four inches in vertical extent. It was quite impossible to isolate the colon on account of the ad-

hesions between it and the omentum, the latter being densely infiltrated and rolled up into a mass a couple of inches in thickness. A few omental adhesions were separated, but not enough to make any appreciable difference in the compression and obstruction of the bowel. The omentum was intensely red and inflamed looking, and although nothing was removed for microscopical section unfortunately, because of the patient's condition, yet it seems reasonably clear that the case was one of colitis and pericolitis, with an enormous inflammatory thickening of the omentum.

The patient made a good recovery, and is now, five months after the operation, almost entirely well and has resumed work, although he still complains at times of gas and slight pain. Of course it is too early yet to be sure that the growth is inflammatory, but one inclines to this opinion for the following reasons:

1. The wide diffusion of the thickening, which involved four inches of the colon and practically the entire omentum, with adhesions between the omentum and anterior wall—lacking the more definite outline of a malignant growth.

2. The fact that the condition has improved with rest, apparently due to absorption, which would not be the case were the growth malignant.

3. The lack of any cachexia and the absence of blood in the stools.

Since writing the above, Mr. W. has had to submit to another operation to relieve chronic obstruction. For the past two months he has been having great difficulty in getting his bowels to move, attended at times with colicky pain throughout the abdomen. During this time he has frequently had to take codeia and belladonna to relieve the pain. His abdomen has remained very considerably distended, and he is always full of gas, not only belching gas, but also passing a quantity *per rectum,* and has required constant dosing with purgatives.

I opened up the old scar on the left side, and found the omentum adherent across the anterior abdominal wall from side to side, extending down to within an inch of the bladder, and also adherent to the sigmoid flexure and descending colon as high up as the splenic flexure. The omentum was first separated from the anterior abdominal wall, and with great difficulty from the colon, and the left half of the omentum removed. After re-

moval of the omentum from the sigmoid flexure a small dark nodule was seen, the size of a pea, resembling a gland, but situated on the convexity of the bowel. This was removed with scissors, leaving an opening through which a probe could be passed into the bowel. This nodule was found to contain fecal matter.

The perforation was sewn up with Lembert sutures. The condition was clearly a diverticulum of the mucous membrane, which was prevented from perforating by the firm attachment of the omentum. About an inch and a half further up a considerable inflammatory mass could be felt in the meso-sigmoid, about an inch from above downwards, and causing the meso-sigmoid to be about a third of an inch in thickness. It was quite clear that this was also a diverticulum, which had herniated into the meso-sigmoid, and the thickening had produced a considerable diminution in the calibre of the gut. However, I could pass very readily my index finger through the gut at this point, and did not consider that there was sufficient reason for doing a resection, so the abdomen was closed.

He made a good recovery, was up in two weeks, and it is now three months since this operation, and he is in excellent health, having free normal evacuations. As there was no evidence whatever of carcinoma, it is quite clear that the case was one of diverticulitis, with a certain amount of colitis, causing adhesion of the omentum.

Case 4.—Dr. O. R. Mabee has kindly given me the notes of a case which occurred in the Massachusetts General Hospital while he was in the Pathological department there, and as it is very similar to the last case I think it will be interesting to give it here.

Mr. M., aged 42, was admitted to the hospital on November 2, 1908. He stated that he had had one attack of gonorrhea. During the previous year he had observed a small mass in the left groin, which disappeared on lying down, and three weeks ago disappeared altogether. At this time the lower portion of the abdomen became sore, and subsequently firmer than normal. There was also pain in the left groin and micturition was very painful.

On examination an irregular oval and elastic mass was felt in the lower portion of the abdomen, extending upwards and

slightly to the left from the symphysis pubis, its upper extremity being on a level with the umbilicus. It appeared to be adherent to the abdominal wall.

On November 9, 1908, the abdomen was opened, and a large mass was seen, but no attempt at removal was made on account of the bad general condition of the patient. A small section was taken for microscopical examination, and reported chronic inflammation. The patient died two days later.

Autopsy.—The omentum was found firmly adherent to the parietal peritoneum covering the left rectus below the umbilicus. It is much swollen and edematous, and contains a large tumor mass, which is deep red in color and which bulges posteriorly and upwards. This compresses the transverse colon, which lies above it, and which is flattened and so compressed as to cause obstruction.

This tumor mass on section is composed of clotted blood, and the colon, which is compressed, shows a small circular perforation having a punched out appearance. Surrounding this perforation is the large thickened and inflamed omentum, which is firmly adherent, hard and friable.

This case is one of perforated ulcer of the transverse colon, with hematoma and inflammation of omentum, and partial obstruction of transverse colon.

Case 5.—Miss S. G., aged 39. Sent into the Toronto General Hospital on November 17, 1900, under my care, by Dr. Burritt.

For the last ten or twelve years she had suffered from attacks of pain in the right hypochondriac region, diagnosed as biliary colic. Being a trained nurse she was seen by a number of doctors, all of whom attributed these attacks to gall stones. Nausea and vomiting were always associated with them, and she found it necessary to be careful in regard to her diet.

She was engaged in nursing a case of typhoid, and when walking home from her patient's house one day she had a sudden attack of severe pain in the region of the gall bladder, accompanied by faintness, and with difficulty continued her walk home. She rested there for two or three hours, and then returned in a cab to her patient's house and went on duty. As her stomach had been bothering her for some little time prior to this she had been taking malted milk in small quantities. When Dr. Burritt, who was attending the typhoid patient, found the nurse

suffering from pain, he had her leave the case and sent her into the General Hospital.

I saw her the following day, and on examination felt an enlargement about the size of a tangerine orange just below the ninth costal cartilage on the right side. It was slightly movable from side to side and dull on percussion, the dulness being continuous with that of the liver. As she was now free of pain, and thinking that she had an enlarged gall bladder filled with gall stones, and as it was Saturday, we decided to defer operation until Monday morning, that is to say, seventy hours after the onset of the severe pain.

On opening the abdomen a mass the size of a tangerine orange was found, involving the anterior wall of the stomach close to the pylorus, and with a perforation in its centre large enough to admit a small lead pencil. There was a slight amount of plastic exudate around the opening, and a little exudate was also found on the parietal peritoneum of the anterior abdominal wall, against which this perforation evidently pressed, which, together with the fact that she had taken such small quantities of malted milk for some days prior to perforation, with the consequent emptiness of the stomach, undoubtedly accounted for the absence of stomach contents in the peritoneal cavity. The mass, which was very hard, was situated midway between the curvatures, and its margin on the pyloric side extended to within one inch of the pylorus. The mass was circular and about two and a half inches in diameter and one and a half inches in thickness. It seemed most probable that the tumor was a carcinoma. However, as the patient was not prepared for so severe an operation as resection of the stomach for carcinoma, and as there was some doubt as to the growth being malignant, it was thought advisable to remove a section for microscopic examination, after which the opening was closed by Lembert sutures.

On section the growth proved to be inflammatory, containing a large amount of fibrous tissue. It was therefore clear that the patient had suffered from gastric ulcer, which had perforated in spite of the enormous thickening which surrounded it.

She made a good recovery, and has since been continuously occupied at nursing. Three years ago I removed her uterus for large fibroids. I spoke with her a few days ago, and she is still

nursing and in good health, but suffers considerably from hyperchlorhydria.

Case 6.—Mrs. H., aged 36, complained of pain and swelling below the liver on the right side.

On examination a mass could be felt the size of a tangerine orange, extending from under the ninth costal cartilage and dull on percussion, the dulness being continuous with the liver dulness. It was somewhat tender on pressure, and at times painful. She had lost some weight during the last year and was paler than usual. Although there were no attacks of biliary colic, yet we thought from the situation that it was likely to be an enlarged gall bladder.

On June 4th, at the Toronto General Hospital, the abdomen was opened in the right linea semi-lunaris. A mass was then seen the size of a small orange projecting from the right lobe of the liver, immediately to the left of the gall bladder, and on the surface of this mass were five or six flattened nodules as large as split marbles. There was nothing in the gall bladder. The mass in the liver resembled carcinoma, but exploration of the abdominal cavity revealed no primary growth. It was therefore thought that the mass was probably syphilitic, and accordingly a small portion was removed for microscopic examination.

After examination of the section the pathologist reported it to be syphilitic. The patient was put on iodide and mercury, and the lump, as well as her symptoms, entirely disappeared in six or eight months' time, and at the end of that period she had put on some weight and was again in good health.

I think these cases show very clearly the difficulty that one frequently meets with in differentiating between malignant and simple disease within the abdomen, even after the abdomen is opened. The frequent complication of cancer by inflammation renders a positive diagnosis extremely difficult and sometimes impossible, but the physiological rest resulting from operation is curative if the condition proves to be a primary inflammation and is not secondary to growth.

I have frequently seen inflammatory masses in the region of the gall bladder, due to thickening of the omentum and adhesions to the viscera adjacent to the gall bladder. The appearance and feeling of such a tumor so closely simulates malignant disease as to be frequently mistaken for it.

Mayo Robson (1) reports several cases in which inflammatory tumors were mistaken for malignant ones. One was that of an old man with chronic intestinal obstruction and a hard tumor in the vicinity of the umbilicus. At the operation a tumor was seen to occupy the transverse colon, omentum, and a few coils of the small intestine, and rapid recovery occurred with disappearance of the tumor, after the performance of entero-anastomosis. Another case was in a man of seventy, with obstruction due to a tumor of the ascending colon. An anastomosis was made between the ileum and sigmoid flexure, and the patient was well three years later. A third and even more remarkable case was that of a middle-aged woman, who suffered from chronic obstruction, and in whom a large tumor was found embracing the splenic flexure of the colon and involving a loop of small intestine, both of which were strictured. As the omentum was adherent and the tumor was nodular and hard it was thought to be malignant, and as its removal was impracticable a double short circuiting was done, colon to colon and small intestine to small intestine. All who saw the case agreed that she would not live three months, yet she recovered, and was in good health a year later.

In 1898 Graser called attention to diverticuli of the sigmoid causing inflammatory pseudoneoplasms.

Neupert (2) reports a case in which there was the development of a chronic suppurative process from perforation of one or more of such diverticuli into the mesosigmoid, with much connective tissue formation and cicatricial contraction of the mesentery. At the operation inoperable carcinoma was diagnosed.

Mummery (3) speaks of lesions of the sigmoid as a cause of colitis. In seven out of thirty-six cases of chronic colitis he found cancer of the sigmoid flexure. Inflammatory conditions of the sigmoid may produce a colitis, and the symptoms are practically identical with those of the colitis due to malignant disease. Bleeding may or may not occur in both cases. In two of his cases of cancer typical mucous casts were passed in the stools. In one case, where symptoms of colitis had been present for five years, there was a malignant growth in the sigmoid.

Schlosser (4) describes four cases of swelling in the abdominal wall after operation for hernia, attributed to silk ligatures.

Wagner (5) reports a case in which a tumor after laparotomy occupied a considerable part of the right abdominal wall, extended into the pelvis, and was adherent to the cecum and omentum. On operation it was believed to be an inoperable sarcoma; microscopically sarcoma or actinomycosis. On dressing the wound a large abscess cavity was discovered, containing part of a metallic instrument used in the original operation.

In three or four cases Hamann (6) has seen inflammatory enlargement of the stump after ligation of portions of the omentum in operations for hernia and appendicitis. Coley (7) and Braun (8) first described the condition, and more recently Leroy (9) has exhaustively considered the question, and Bull (10) reports a case of enlargement of the omental stump resembling malignant growth after hernia.

These inflammatory tumors of the omentum usually appear one to ten weeks after operation, though the interval has in some cases been from four months to three years. They are probably due to infection from ligatures. The swelling may be almost anywhere in the lower abdomen, but is usually near the umbilicus. The tumor has a smooth surface, is firm, sensitive to pressure, and uninfluenced by respiration. If there are no parietal adhesions it is movable laterally and upwards, but not downwards, and there is dulness on percussion, owing to the fact that the intestines are behind it. The order of symptoms is pain and fever, chills and vomiting, the temperature being dependent upon suppuration. Suppuration may occur, or resolution in the course of several weeks.

I have recently had a case of this sort, which followed an operation for the radical cure of an inguinal hernia by another surgeon. At the operation he resected a large mass of omentum, tying the stump with catgut ligatures. The patient left the hospital two weeks after the operation, and about a week later complained of pain in his abdomen. On examination a smooth rounded tumor could be felt below the umbilicus, which was diagnosed as the lower end of the omentum. This lump at first was about the size of one's fist, but gradually increased in size until ten days later, when I was called to see the patient, there was a mass in the lower abdomen, extending from side to side, and quite eight inches in transverse diameter, slightly movable from side to side, but adherent below. The patient had had

chills, and his temperature for the last few evenings had varied from 101½° to 102½° F. His pulse rate, however, did not exceed 90. The mass was very tender to the touch, and I thought I was able to make out, although somewhat indefinitely, deep fluctuation. I advised an incision, which was accordingly made, and about a pint of thick pus was evacuated, containing the colon bacillus. The patient made a good recovery.

Braun (11) reports the case of a woman, aged 43, who had a tumor the size of an apple on the left side of the abdomen, leading to a diagnosis of carcinoma of the sigmoid flexure. On removal it was found to consist of fatty tissue infiltrated with connective tissue, with few nuclei and slight perivascular small-celled infiltration, but there was no sign of malignant growth. Subsequently she developed another similar inflammatory tumor near the site of the former one, which was also removed. She died after the second operation from purulent peritonitis, originating from a small intestinal perforation. He also records two other cases, in which tumors disappeared spontaneously.

Monsarrat (12) reports the case of a man of 44, who had suffered from severe abdominal pain, vomiting, and distension for six months, with obstruction for eight days. On examination a firm and tender mass, movable upwards, was found in the left lower abdomen, and at the operation a tumor the size of an apple was removed from the middle of the sigmoid loop. Microscopical examination showed the stricture to be due to a mass of cicatrix and inflammatory infiltration, with perisigmoiditis and considerable exudation.

Monsarrat reports another case in a man aged 47, who had had constipation for a year, tenesmus for two months, and recently blood in the feces. On examination there was no abdominal distension, but a firm swelling was felt in the left iliac region, not painful on moderate pressure. The passage of a bougie was arrested about four inches up the pelvic colon, and there was hemorrhage. A diagnosis of malignant disease was made. On operation there was seen to be firm infiltration and induration of the bowel for at least six inches, the entire length of the sigmoid loop being converted into a thin-walled tube, and bound down to the parietal peritoneum of the left iliac fossa by long standing adhesions.

Moynihan (13) reports the case of a man aged 62, with

intestinal trouble of seven months' duration, attacks of subacute obstruction during the last three months, and tumor on the left side. A diagnosis of carcinoma was made. On operation a tumor the size of a cocoanut was found in the left extremity of the transverse colon, which was red and thickened, the descending colon and sigmoid flexure pale and empty, and extirpation impossible. An anastomosis was made between the sigmoid flexure and the distal extremity of the ileum, followed by improvement and complete disappearance of the tumor.

Proust (14) gives the case of a woman aged 32, who had a progressive tumor, and in whom laparotomy had previously been performed. The tumor consisted of adherent omentum, the lumen of the colon being constricted by a projecting spur, which on section showed inflammatory thickening and sclerosis. There was no sign of malignancy, and thirteen months later the patient was well.

In these cases of tumors of the sigmoid we probably have two types of inflammation.

1. *Chronic adhesive pericolitis,* following upon an acute perisigmoiditis. In this type there will be a history of the acute stage, with absence of stenosis, hemorrhage and tenesmus, which will reveal the diagnosis in most cases. Long retention of fecal matter in the sigmoid is probably the primary factor in these cases, the direct result being such damage to the bowel that intestinal bacteria permeate it and set up localized peritonitis. In other cases feces are retained in acquired diverticuli, or hernial protrusions of the mucosa and submucosa.

I have recently had a case of acute diverticulitis, with perforation and the formation of abscess, which, if perforation had not occurred or if the abscess had discharged through the bowel, would undoubtedly have resulted in a large mass, which would have been difficult to distinguish from one due to malignant disease. I am reporting this case in full later.

2. *Infiltrative sigmoiditis,* with no history of an acute attack.

The sigmoid is almost invariably involved in infiltrative colitis of the descending and transverse colon, but the primary seat may also be the ascending colon and cecum. In the milder cases improvement may occur without operation, but the patients may suffer for years.

Graser's diverticuli, which have been previously referred to,

may occur in any part of the small and large intestine and are congenital or acquired, the acquired form being most common in the large bowel. They occur mainly in two rows, at the sides of the gut or close to the mesenteric attachment, more rarely on the convexity, the commonest site being the appendices epiploice. They may be the size of a hazelnut. When small they are semiglobular, but tend to become flask-shaped as they increase in size and the aperture into the bowel is usually smaller than the maximum diameter of the diverticulum. They are not often found much above the middle of the descending colon, and increase in number and size from above downwards. They are almost invariably full of fecal material.

They may be (1) of congenital origin, or (2) due to pathological causes affecting the intestinal wall. In 80 cases the average age was 60 years, and about 65 per cent are males. They are fairly common in connection with obesity. The normal sacculation of the colon is often exaggerated in constipation, and is sometimes found in association with these diverticuli. The longest retention of fecal material is in this portion of the bowel.

Scheiber suggests muscular weakness or deficiency as the primary cause. Bier the "worked out" muscularis in senility in individuals who have been constipated or obese. The secondary pathological changes are atrophy of muscular fibres and of the mucosal glands, difficulty in expulsion of fecal contents tending to inspissation and concretions, and inflammatory changes in the sac wall due to bacteria.

The direct results are (1) tumor; (2) stenosis from cicatricial contraction and obstruction; (3) mimicry of carcinoma.

The fundamental pathological characteristic of inflammatory growths simulating neoplasms is that the newly formed tissue is directly continuous with the original seat of the inflammation, and that the proliferating tissue remains under the influence and control of the organism. Tumors on the other hand are autonomous.

In inflammatory conditions definite chronic obstruction is rare, and tenesmus and blood in the stools are seldom absent in malignant disease below the descending colon. If obstruction is absent the symptoms and inflammatory mass will disappear with rest in bed, light diet and aperients. The result of treatment may thus throw light on the diagnosis.

If when the abdomen is opened there is any doubt as to the nature of the lesion a small piece should be removed for immediate microscopic examination; or if, owing to the extent of the growth, it is impossible to remove it, a small piece should still be removed, so that one may be sure as to the nature of the lesion.

In a case where the diagnosis is doubtful an exploratory laparotomy should be performed even though the prognosis may seem hopeless, as it will remove all doubt, and in some cases the tumor may prove operable. In other cases a palliative operation may relieve urgent symptoms or unexpectedly result in cure.

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DYSARTHRIA, APHEMIA, APRAXIA, IDIOGLOSSIA, AMNESIA; WITH CASES, PROGNOSIS, DIAGNOSIS AND TREATMENT*

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The term aphasia is often so erroneously applied that it is not out of place to discuss some of the disorders of speech often thus misnamed; for there is the greatest therapeutic importance in knowing whether a speech disorder is (1) a permanent organic defect, congenital or acquired, or whether it is (2) a functional disability due to intoxication, edema or (3) arising purely from a vicious habit or fixed idea. A *résumé* of modern knowledge of this subject is the more useful in that the paper of Pierre Marie of Paris gave to many the impression that the classical views of aphasia were false; and those who have not examined the question are unaware of the fact that the further studies incited by Marie's article have established more firmly than ever the regional classification of aphasia.

It will be recollected that Marie denied the occurrence of *aphemia* in any form, by which term we denote the inability to utter words although all the muscular movements for doing so can be managed when words are not in question. It is supposed that the *kinesthetic* images are unavailable either by destruction of their centre, the left third frontal convolution, or by interruption of the path connecting this centre with the psycho-motor area concerned with moving the muscles of speech. Marie termed the loss of utterance *anarthria,* that is, absence of power to articulate, a most misleading application of a term always used in quite a different clinical sense; for it is applied only to cases which also show disability of the muscles to normally perform other acts as well as that of speech. This is clearly illustrated by the patient now shown.—Hyde.

Anarthria.—In her, there was a gradual loss of clearness in the utterance of words and in the modulation of sounds, until

* A clinical lecture before the Washington Medical Society, "Remarks on Aphasia and Some Other Disorders of Speech."

now she is utterly unable to articulate a single word or to make any but the most elementary sound, in which it is easy to hear that the vocal cords are quite passive. She is truly anarthric, because, as you observe, her tongue is almost completely paralyzed; the palate is highly paretic, as is the pharynx, for she is unable to swallow solids at all, and liquids are taken only with difficulty, and sometimes flow through the glottis. There is also a slight paresis of the lower facial and jaw muscles, with a tendency to dribbling of saliva. But she is not an aphasic; could the muscles move, she could utter the words she wants, of which she has a perfectly clear notion, just as she has of the act of swallowing, although she cannot perform it. Her disability is caused by the very rare condition, the partial necrosis of the homologous areas of the two hemispheres which bilaterally govern the movements of the tongue, larynx, pharynx, palate and lower part of the face. So far as I know, this case is unique, for no other areas are implicated.

Dysarthria is the condition heard in bulbar paralysis. It is there accompanied by atrophy of the muscles of articulation, but pseudo-paralysis resembles the case I have shown, for there is no muscular atrophy, but only an upper neurone paralysis, arising, however, from intracortical lesions which are usually multiple and proceed from arterio-sclerosis.

The cases of *aphemia* where the third frontal appeared intact are explained by serial sections, which show that there is an interruption in the white fibres of the centrum ovale between the third frontal and the temporal lobe (Mahaim, Congress of Geneva). The same observer reported two cases without motor aphasia in which the posterior two-thirds of the insula were destroyed.

That the so-called lenticular zone of Marie has nothing to do with *aphemia* is shown by ten cases which Compte cut in series, in which the lenticular nucleus was free from necrosis, although small areas of destruction of the internal capsule had produced the dysarthria of pseudo-bulbar palsy.

When an aphasia is partial, it is usual for the substantives to disappear before verbs and adjectives, more especially in cases of cerebral tumors of the speech zone. The most likely explanation of this is that most substantives are used less often than

the common verbs and adjectives. Besides, it would seem by their use by primitive peoples that the verb and adjective are more deeply rooted in speech, as they are first acquired.

The inability to pronounce certain consonants or speaking in a nasal voice may be a congenital defect, or fault of training; but the nasal and thick voice quite often occurs in the course of a *polyneuritis* from degeneration of the nerves to the palate. The prognosis in this case is quite good as a rule.

Idioglossia.—The most important element in the prognosis *dysarticulosis of childhood* is the perseverance and intelligence of the mother and nurse. This is illustrated by a musician's child aged four and a half, who was under my care in Paris on account of almost unintelligible utterance. I was not sure whether this was entirely due to some congenital defect of the nerve apparatus. Had I given up efforts after the mother had failed in two weeks to produce the least improvement, the former diagnosis might have been too quickly acquiesced in. But as I was pretty sure that training could overcome at least part of the disability, the father was urged to take the child in hand, and his efforts, seconded by those of the mother, completed a cure in four months.

We may pass now to the *treatment of motor aphasia.* The chief difficulty to conquer is the annoyance and loss of mental balance the patient feels in not being able to perform the habitual automatic act of speaking. Thus, psychotherapy becomes an important element of the training. A child is accustomed to being controlled and compelled to do things which he dislikes, in the acquisition of arts. But it is very difficult for an adult to turn his energies into new activities. More especially is this the case with the difficult co-ordination required for a new automatic speech apparatus. One of the best methods is the learning of verse and its repetition. Very important is the utilization of the motor images of the lips seen in a mirror, as in the training of deaf-mutes.

The better *prognosis* of aphasia as compared with aphemia is due to the constant re-education the patient's surroundings give. He is assailed all day long with words by hearing or sight, and has to make efforts to comprehend in order to understand his fellows. On the other hand, so difficult are the first words of the aphemic that inertia is apt to get the better of him, and

efforts to speak cease to be made. As soon, however, as an improvement begins, each year will bring further gain.

Perhaps the greatest factor in prognosis is the intellectual and moral status of the individual. If the memory is gone, hope is small. If internal language has disappeared as well, the prognosis is bad. Simple methods of testing the internal language are for the patient to indicate the number of syllables in the word representing an object shown him.

In the diagnosis of aphemia it is important (1) to exclude dysarthria; (2) to exclude sensory aphasia, that is, word-deafness or word-blindness; (3) to test the power of mimicry and the repetition of words. Spontaneous mimicry only disappears as intelligence is impaired; (4) to test the singing power, which is often retained along with the vocalization, which in some persons is merely an automatic accompaniment of the music; (5) to test the reading power, which is nearly always at first slightly *alexic,* possibly through the mechanism which Von Monakow has termed *diaschisis.* This may be expressed simply as the interference with the function of one centre on account of the impairment of another centre with which the first is intimately connected physiologically. (6) Writing with the left hand is sometimes possible; and it may be reversed as in a mirror; and the name can nearly always be signed, though rarely spoken in complete cases.

Differential diagnosis from sensory aphasia is easily effected by the transcription of letters, which is made in a servile fashion, and is really a drawing when there is word-blindness. *Simulation* is detected by its complete mutism; the real aphasic can always utter some sound; and it is characteristic that he makes most violent attempts to speak, while the simulator remains quite calm and makes no sound at all. The pretended mute's mimicry is not defective; he has no difficulty in comprehension, and is not likely to show *apraxia,* unless he has been very well coached; besides, the true aphemic rarely attempts spontaneously to write with the contralateral hand, while a pretended or hysteric readily does so.

A few words on *apraxia,* of which aphemia is merely a special kind. The term is used to denote an inability to perform an act conceived, and the substitution of some other act, an inability

neither due to disorientation, amnesia, aprosexia (lack of attention), paralysis, ataxia nor agnosia (inability to recognize objects felt, smelt, heard and seen). It is very simply ascertained by demanding such acts as putting out of the tongue, touching the ear, raising the leg, etc., or by the less simple series of acts used in lighting a cigarette, cutting up one's food, and the still less simple acts used in dressing oneself, sealing a letter, etc.

The act of putting a cheque in the waste basket and pocketing the envelope is not strictly of the same order, for it is due to *failure of attention.*

Still another form is characterized by a general contraction of all the muscles of the limb concerned in the desired acts, which are less and less well performed as they are more complicated; the order of excellence as in Kleist's case was (1) flexion and extension, (2) turning, sitting, arising; (3) going upstairs, standing on one foot, on tiptoe; (4) impossible to leap, to draw a circle in air with foot.

The faculty of performing orderly movements, *eupraxia,* is believed to reside in the left third and second convolutions. This centre guides the co-ordinate purposive movement complexes of limbs on both sides. Therefore the *corpus callosum* must be intact for its action. Its destruction does not seem to impair the *autokinetisms,* whether these are merely muscular *synergies,* such as the (1) extension of the wrist when the fingers are flexed; (2) the dorsiflexion of the foot when the leg is lifted; (3) the bending of the knees when the trunk is extended backwards; or whether they are certain *habitual movements* such as (4) walking or (5) shaking hands.

Sensory aphasia is really a form either of *amnesia* or of agnosia; and as failure of recognition is in reality lack of power to remember either the thing itself or to recall the connections which associate it with other things, amnesia becomes the chief factor in a sensory aphasia of the acquired type.

Agenesia verbalis.—When congenital, moreover, this is the failure to fix the memories of words, which gives rise to the word-blindness which perhaps occurs to a greater or less degree in about two per thousand school children, who never acquire the power of reading with facility as a result of their school training. The powerful stimulus of some interest in after life, however, may call forth the extra effort needed for such defec-

tives to learn to read freely. Thus, one of Hinshelwood's cases (*Brit. Med. Journ.*, 1907, vol. II.) taught himself to read in four years through his interest in the football reports, over which he pored for four hours every evening in order to follow the game, for which he had a passion. Seven years at school had hardly taught him to read a word.

Patients of this type can in reality always be taught to read if placed in a special class where the tactile images are cultivated by the use of blocked letters. It is believed that the defect is due to hereditary insufficiency of the associational area between the visual centre and the word-hearing centre. We do not know whether their training is made possible through the use of the right-side centre or whether it is not accomplished entirely by the association of kinesthetic images with the sight of the written words, as in the deaf-mute.

The condition must be *diagnosed from ocular defects* by (1) the size of the letters making no difference to the reading power of the patient; (2) by the patient's ability to copy the letters; (3) by the fact that figures and some few words and letters are readily recognized. The general mental defect of *imbecility* is excluded by the fact that the child's auditory memory is quite good, and that all school tasks except reading are normal.

The same principles of diagnosis and educative treatment may be applied to *adult alexics;* but the prognosis is qualified by the facts mentioned when discussing aphemia, *viz.*, the difficulty of a mature person to recommence the kind of education which every infant performs as a matter of course.

Word deafness may be classified into three degrees. In the most grave, the patient does not know he is listening to speech at all when words are uttered in his presence. In the second, he does not recognize the language; and thirdly, in the slightest degree, he does not understand the meaning; the extent of this failure may vary from complete want of comprehension to an uncertainty or confusion only in complicated sentences.

The *prognosis* of the latter cases is fairly good when the cause can be suppressed; for it would seem that considerable education of the auditory word-centre in the first temporal convolution is possible; and the patient can hardly help automatically listening to the words of his companions.

As the text-books contain clear and full descriptions of this

affection I shall not enlarge, except to point out the distinctions between it and the *functional aphasias and amnesias of psychic origin.* The best way to do this is by the citation of cases recently seen.

The first is an example of aphasic amnesia of organic cause. It is introduced by way of contrast. It is characterized by the loss of power to express the thought in words, although the patient *feels* that the idea is there, and can sometimes explain it in a periphrasis. My patient, even after ten minutes' study, is unable to recall and relate in words the story of Noah Webster. The following is her account, with much questioning. It begins with N. *Noel?* No. *Noah?* No. *Newel?* No. *Noah?* That's like it. *Recognizes Webster. College?* Yale. *Profession?* Lawyer. *What did he do when young?* Taught school. *What else?* Don't know. *A book?* Yes. *Kind?* Don't know. *Dictionary?* I suppose. *Date?* 1790, too late. *Why?* My idea earlier, but I don't get the rest. *Was it in war time?* The other one. *Name?* —— *Against whom?* All other kinds in United States. *Civil?* Yes, that is it. *Date?* 1861. *Did Webster live then?* Too soon. *Against whom then?* He was not old enough, don't remember now, though I taught school.

She did not recollect the capital of Germany nor in what country Edinburgh was situated, although she had once been a school teacher; but she could reply quite intelligently to any question if she remembered the word to answer, and she could read and write; but in the latter there were frequent omissions of words, of which she was quite aware, and deplored it. She could not recall the word she wanted, although she at once recognized it when proffered. Her condition intermitted more or less, but never became normal. The importance of the case lay in its diagnosis from a purely psychic amnesia; and to ascertain whether it was not due to a chronic intoxication, or whether it was caused by the cerebral necrosis of arterial defect, as I finally decided, as metabolic treatment failed to ameliorate the condition, and its oscillations were very slight. That it was not a psychic case is shown by its entire unamenability to psychotherapy, by its genesis apart from any psychological cause, and by the nature and extent of the responses to psychometric tests too long to detail here.

The second case, seen with Dr. Claytor at the Garfield Hos-

pital, is an example which may be called *hysterical aphasia*, in which the fixed idea not to speak was a *reaction of defence* against the fear of relating some intensely humiliating experiences. Indeed, the patient tried to chase them from his thoughts; and the aphasia was partly in consequence of this.

Other Psychic Cases.—It is comparable to the reaction of one of Janet's patients, who, because she wished to conceal a fault from everyone, began to lie not only about that but about everything else that she spoke.

Another case of Janet's, on the contrary, became completely aphasic as a result of trying to conceal thought. The mechanism of a remarkable case described by Dr. Hickling is similar; but is derived from a fixed idea which is only part of a general paranoid trend. The patient becomes aphasic on account of the delusion that he has been ordered not to speak for so many hours by his hypnotizer.

Formerly, the psychological mechanism of hysterical aphasia was a mystery; but modern *psycho-analysis* has taught us the why and wherefore. Case No. 2 is a very common type.

Another case which reacted in this way was conduced to by a metabolic defect which led also to *narcoleptic confusion*. Complete deafness and aphonia were the results of a most painful experience in a hospital in Idaho. The condition was recovered from quite suddenly by the stimulating touch of a detective.

Cerebral tumors as causes; faulty diagnosis.—Hysteroneurasthenia is quite commonly diagnosed to explain paraphasia, which later proves to be due to a cerebral tumor. Such was the case of the girl whom I observed in Paris, and who was treated as a neurotic and isolated for several months by so eminent a neurologist as Déjèrine. In the autumn she entered the clinic of Ballet with a well-marked amnesic aphasia for substantives, very similar to that of the first case here reported. She had all along been inattentive and frivolous in her ways and had shown slight mental dulness. I watched the slow development of the papilloedema, which clinched the diagnosis, and a tumor was found in the left temporo-parietal sub-cortex.

Such recurring attacks of aphasia must be distinguished from those due to ophthalmic migraine, for both may be accompanied by headache and vomiting. The jargon-aphasia of ophthalmic migraine is, however, almost always accompanied by

hemianopsia, and the attacks are of very short duration, and separated by a period of complete good health; whereas a careful examination of these tumor cases will reveal a defect of speech even between the exacerbations.

In conclusion this sketch of a vast and complicated subject is designed to emphasize the extreme importance of early diagnosis of forms of aphasia which are purely psychics[5]—and which are most amenable to proper treatment when taken early. Even in the organic forms early detection of the cause may enable us to impose means for its suppression and thus to arrest, even though not to cure, the patient's disease. Such are the cases of temporary aphasia which occur in the course of arterio-sclerosis through the variations of blood pressure and osmosis in the weakened blood vessels. The edemas of uremic states are of this variable type, too.

Lastly, variable amnesia and slow comprehension may be one of the earliest signs of intracranial new growth, which may be revealed in an examination by one skilled in neurological technique[6].

I have said nothing of the defects of speech arising from faulty habits of mental attitudes such as stutterings, lalling, lisping and the tics of speech, coprolalia, etc., in which the patient is compelled to utter obscene remarks, or bark or cough. These are psychasthenic phenomena, and form a chapter of neuropathology in themselves[7].

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RUPTURE OF TENDONS, WITH A REPORT OF CASES: TWO OF THE TENDO-ACHILLIS AND ONE OF THE LIGAMENTUM PATELLAE

BY B. E. MCKENZIE, B.A., M.D.

CASE 1.—Mr. S., 46 years of age, fell in the winter time when descending the steps from his door to the street; felt a sharp pain at the knee and realized that he could not extend the leg. Saw him a few hours afterward with Dr. T. H. Stark. We advised operation and suturing of the fragments, but consent could not be obtained. There was no extensive swelling, and although the sulcus could be found between the tibial tubercle and the patella, the joint cavity probably was not opened. Strapping was employed above the patella, passing obliquely behind the calf, holding the patella well down to its normal position. The entire limb was enclosed in cotton batting, and a fixation plaster dressing applied in full extension. The limb was swung at a considerable height, so as to lessen the tension upon the quadriceps extensor. The patient spent his time pretty comfortably, having but little pain. The dressing remained in place for six weeks, after which the patient was allowed up, and gradual use of the limb was permitted. In about three months from the time of the accident the patient could walk pretty well, and shortly afterward returned to his ordinary occupation. This gentleman died of cerebral hemorrhage about one year after his accident. He had then acquired such facility in the use of the limb that he was not lame, and experienced scarcely any inconvenience or disability.

CASE 2.—Mrs. S., 55 years of age, a large, fleshy woman, weighing about 180 pounds, turned to speak to a friend while standing on the sidewalk, and in doing so stepped upon the kerb-stone in such a manner that the weight was unexpectedly carried upon the anterior part of the foot, while the heel projected over the edge. There was a sudden snap, a violent pain and loss of ability to stand. A few days afterward I saw this patient, with Dr. Garrett, of Kingston. As there was evidently much local injury done, and a large amount of doughy swelling,

it was thought advisable to cut down, with a view to suturing the fragments. Upon doing so, several blood clots were turned out, the cavity washed, the frayed ends trimmed to evenness and sutures applied in the manner to be hereafter described. The healing was uneventful, and the recovery entirely satisfactory. In six weeks walking was very gradually resumed, and had become quite normal within three months from the time of the accident.

Case 3.—Mr. S., a dentist, 35 years of age, sustained a painful injury above the heel, the nature of which was not recognized for a few days afterward. When it was observed that a depression existed over the region of the tendo-Achillis, the conclusion was reached that an incomplete rupture of the tendon had occurred. The foot was put up in a position of fixation at right angles, in a plaster-of-paris dressing. The gentleman continued at his work all the time. After about three weeks the dressing was removed. A period of two years has now elapsed, and while recovery may be considered satisfactory, yet there is an embarrassing element of disability. It is still impossible to rise upon the anterior part of the foot, using alone the calf muscles of that limb. This case I saw with Dr. Harry Beattie several weeks after the receipt of the injury. At that time it was advised that no operative measures be adopted.

In recent years surgical work pertaining to the various tendons of the body has been much resorted to because of the new field which has been opened up in tendon transposition for the relief of various paralytic disabilities. Opportunities, however, for dealing with tendons whose continuity has been separated by accidental force are comparatively rare. Tendons are much more frequently torn asunder than muscles, and it generally occurs as a result of some violent effort; it may, however, be caused by direct violence, as by a cutting instrument, or through coming into contact with a stone or a hard edge or angle. Commonly there results at once pain and loss of function and swelling at the point of rupture, and frequently there is recognized a distinct snap, which is both felt and heard. Local examination will generally reveal a distinct depression at the seat of injury. The rupture may be only partial, but is generally complete.

The tendons most frequently ruptured are those of the rectus femoris, of calf muscles, and of the triceps extensor and biceps flexor cubiti; the relative frequency is in the order named.

Muscular violence similar to that which sometimes produces fracture of the tuberosity of the os calcis may cause rupture of the tendo-Achillis. Injury, however, may occur as the result of a mis-step (such was the case in an accident which occurred to a prominent member of our profession a few years ago). Often the tear is only partial. A gap between the ends or a depression at the point of injury, local pain, swelling and loss of function, are diagnostic.

Recovery is by means of fibrous union, similar to that which occurs after ordinary subcutaneous tenotomy. Large separation of the severed ends and extensive tearing of the tendon sheath are unfavorable conditions for good healing. If there results a long, fibrous cord connecting the parts, functioning will be much impaired, and operative measures should be adopted. If an open wound has been made, and the severed ends separated widely, each end is liable to become adherent to the sheath at the level of retraction, and as a consequence there may be no serviceable connecting band. If the wound become infected, inflammation may extend amongst the muscles.

TREATMENT.

In not a few instances the limb may be placed in such a position as to favor approximation of the severed ends. When tendon section has been made by the surgeon's knife subcutaneously, with careful aseptic precautions, it may fairly be said that non-union never occurs, nor do adhesions result. The union between the severed portions of the tendon is so satisfactory that complete normal function is the constant result. The exigencies of accidental separation, however, produce conditions much less favorable. The portions of tendon are usually frayed and irregular; blood clots are liable to form, and by their interposition interfere to a considerable degree with satisfactory union. The force causing the rupture is likely to produce a large measure of retraction on the muscular side of the injury. Extensive rupture of the sheath is likely to occur, and if the injury have been produced by direct violence there may be a compound injury, which favors sepsis. All of these attendant circum-

stances warrant the advice that in most cases operative measures should be adopted.

NON-OPERATIVE TREATMENT.

In the case of the ligamentum patellæ, or the tendon of the quadriceps femoris being ruptured, strapping may be employed so as to draw the lower portion of the muscle down well toward its normal position and the uppermost fragment into close contact with the distal fragment. The entire limb should be encircled with a layer of cotton batting, over which a firm, closely applied plaster-of-paris fixation should be applied. If, then, the leg be swung from a couple of pulleys, so as to approximate the femur toward the body, the origins of the quadriceps femoris will be so placed as to permit apposition of the torn ends in a favorable way. The surgeon should exercise his best judgment in determining whether the local conditions are such as to enable him to approximate the fragments reasonably well. If the local injury has not been very extensive, and the fragments can be closely approximated, he may reasonably look for a satisfactory result, but the period of disability is likely to be longer than if operative measures be employed.

In the case of rupture of the tendo-Achillis, the foot and leg should be so dressed as to extend the foot as fully as possible upon the leg, thus allowing the heel to approximate to the calf. Fixation in this position should be maintained for a period of at least six weeks, after which great caution should be observed lest the new material be stretched out to a thin cord.

OPERATIVE TREATMENT.

The general consensus of opinion seems to indicate that in some cases it is safer to cut down freely upon the ends of the severed tendon, turn out the blood clots, trim the lacerated and irregular ends, and having brought them into as close approximation as possible, suture them together. The writer has found it advantageous to pass a strong, coarse suture from side to side of each fragment of the tendon, and then to put several sutures from the superficial surface toward the deeper, reaching beyond the suture first inserted. The first one becomes a strengthening element to prevent the latter ones from tearing out. In all cases the most careful aseptic precautions should be observed.

Probably the best suture material to use is silk, prepared as recommended by Lange and used by him in most of his tendon surgery. The silk is prepared by boiling in bichloride solution, preserving in alcohol, and then boiling in paraffin at the time of the operation.

One need not hesitate to stitch the tendon so thoroughly as to grasp it firmly. Silver, of Pittsburg, has shown that it is almost impossible to strangle it. Even if, for any reason, the torn ends cannot be brought into complete apposition, one need not despair of a satisfactory result. It has now been fully demonstrated that good tendon will develop along the course of the silk strands intervening between the severed tendon ends.

It is wise not to allow the new tendon structures to be stretched by the use of the limb for a period of three months. Fixation should be secured in such a manner that the united fragments may not be pulled upon.

Summing up, it may be said:

1. Tendons are occasionally ruptured either by muscular action or by direct violence.

2. If the rupture be subcutaneous, and if no great violence have been done to neighboring structures, and if the severed ends can be closely approximated, simple fixation in the position of election may result favorably.

3. If the skin be torn, if much violence be done to neighboring structures, and if good apposition cannot be otherwise obtained, it will be well to operate. Expose both torn ends, cleanse thoroughly, trim the frayed ends, approximate as closely as possible, using silk, and, if necessary a bridge of silk strands, between the ends which cannot be brought into apposition.

4. Prevent any force being put upon the point of suture for a period of eight to twelve weeks.

Selected Articles

THE THERAPEUTICAL VALUE OF FORMAMINT IN SEPTIC AFFECTIONS OF THE ORO-PHARYNX

BY PHILIP DE SANTI, F.R.C.S.

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As a substitute for gargles, mouth washes and ordinary lozenges in the treatment of inflammatory and infective conditions of the mouth and pharynx, I have for some time past been experimenting with a newly-introduced drug, "Formamint," administered in the form of tablets: it is the object of this brief article to put on record the clinical results I have obtained thereby.

My attention was first drawn to this preparation by a note in the *Lancet,* December 23rd, 1905, page 1,871, in which Dr. Rosenburg, of Berlin, referred to the successful use of formamint in cases of streptomycosis, lacunar tonsilitis, and acute exacerbations of chronic pharyngitis, in which streptococci were concerned. Bearing in mind the many disadvantages existing in the ordinary modes of disinfection of the mouth and pharynx, I have always been on the lookout for some therapeutical agent that could be relied on as an efficient oral antiseptic, non-toxic in its action, and applicable, particularly, for inflammatory conditions existing in infants and children. The results obtained in my practice by the use of formamint in the form of tablets lead me to the belief that an efficient therapeutical agent has been found in this preparation, a conclusion already arrived at by several Continental observers.

Formamint is, according to Seifert, a chemical combination of formic aldehyde and milk sugar. Each tablet contains so much of this new chemical combination that, when the tablet dissolves in the saliva, .01 of formic aldehyde is set free, and, in its *status nascendi,* exercises a strong disinfectant action. A

small quantity of citric acid has been added to render the taste of the tablets pleasant and refreshing. The preparation in its dry state is free from odor, is easily split up into its component parts, and is markedly palatable.

Seifert[1] made experimental investigations with collections of streptococci, pneumococci, typhoid, and diphtheria bacilli. He found that a solution of one tablet in 10 c.c. of water destroyed their germs in from five to ten minutes. This solution was also added to culture tubes of bouillon, agar, or gelatine, with the result that they proved sterile, no growth taking place in them, although distinct and characteristic development of the bacilli took place in control tubes. He made also a series of experiments on animals, and obtained identical results.

Dr. Daus[2], of Berlin, mentions the following results obtained on treating patients in the Municipal Hospital, Gitschinerstrasse, Berlin:

"In acute follicular tonsilitis a large number of cases yielded promptly to the treatment. A fall in temperature, improvement in swallowing, and relief from the feeling of general prostration manifested themselves. We further used the tablets of formamint in conditions which arose from infective processes within the mouth and pharynx, viz., acute inflammatory swellings of the submaxillary glands, mumps, and middle ear disease. In all these cases every variety of mouth wash was withheld, and still the acute symptoms subsided as rapidly as they might have been anticipated to do after the most vigorous use of gargles. The speedy disappearance of foul breath was most remarkable. All the cases took the tablets quite eagerly; in fact, their aromatic taste was perfectly pleasant to the patients. No trouble was experienced even in administering the tablets to those patients who had difficulty in opening their mouths, and with whom the use of gargles or swabbing out of the pharynx with disinfectants was quite out of the question. No indication of irritant or other injurious action made its appearance, even after large doses. The urine remained free from albumen and sugar."—*Medical Magazine.*

[1]*Pharmakologische und Therapeutische Rundschau*, No. 14, 1905. "On Formamint Tablets."

[2]*Medizinische Klinik*, No. 16, 1906. "The Disinfectant Action of Formicaldehyde on Mucous Membranes."

PEPSIN, ITS ORIGIN AND CHANGES

In no branch of internal medicine has greater progress been made than in the diseases of the digestive tract. It is almost incredible that up to comparatively recent times digestion in its various phases was treated empirically.

The introduction of pepsin as a remedial agent effected a complete revolution in the method of restoring to normal the ailments, which in the old days were classed in a group as dyspepsia. If physicians were to observe anniversaries of the discovery of remedies which had proved a blessing to mankind, the entire profession would unite in remembering the fiftieth anniversary of the first manufacture of pepsin in this country.

Just a half century ago, the late John Carnrick, the eminent physiological chemist and the father of physiological products in the United States, made possible a new epoch in American medicine by producing the first pepsin.

Pepsin had been made in a small way in Europe before Mr. Carnrick's enterprise caused it to be introduced here, as it was originally suggested by Dr. Corvisant, of Paris. The quality was so poor, however, that its use was distinctly limited.

The study of pepsin is made doubly interesting by the story of the first known application of the gastric juice as a remedial agent. The *Boston Medical and Surgical Journal* of April 17th, 1856, records the first case of its kind in medical annals.

Under the heading, " A New Method of Removing Soluble Substances from the Oesophagus," Dr. P. W. Ellsworth, of Hartford, Conn., writes his experience, an excerpt from which is given herewith:

" In November, 1851, I was sent for to assist Dr. A. W. Barrows, of this city, in a case of choking in a lad 12 years old. An attack of scarlet fever some time before had left a stricture, probably at the cardiac orifice of the stomach. For several years he had been unable to take any substance thicker than soup. On this occasion he had attempted to swallow a scrap of pork, and every effort to remove the obstacle had failed. A probang was passed without result. No nourishment could be taken. After four or five days the lad was exhausted

from lack of food, though attempts had been made to support life by broth enemata.

"It occurred to me that the flesh might be dissolved, and that the best solvent was the gastric juice itself. We obtained the stomach of a freshly killed pig, the contents were strained off, and a teaspoonful given every hour or so. This was at night. Early in the morning the mass was softened and easily passed into the stomach without instrumental aid. The patient suffered extremely from his long fast, and had a severe attack of fever, but recovered after a week or two. About two years after he was again choked in a like manner, and the probang failed to menced the manufacture of pepsin about five years after Dr. pursued, and in a few hours the oesophagus was in good order without further manual aid.

"On March 22nd, I was sent for to assist Dr. Child, of East Hartford, in a case of similar character. A girl of 17 had suffered from scarlet fever and her throat had seriously troubled her. She tried to swallow a tough piece of veal, which became fixed in the oesophagus and could not be dislodged with instruments. I suggested gastric fluid. We commenced giving it in half teaspoonful doses every half hour. She passed a restless night, but the next forenoon threw up several small fragments, and in the afternoon the mass was swallowed after the ejection of several stringy fibres.

"I do not know that this is altogether a new treatment, but no author in my possession speaks of it, nor had it ever been suggested to my knowledge. Even now it is not absolutely certain that the solvent properties of the liquid are useful; still, as its use had been followed by relief three times, it is worthy of further trial. If some more palatable substance could be found it would be desirable. Whether the gastric juice of simply herbivorous animals would answer, I can hardly say; but it seemed advisable to try that of a carnivorous one, as it would, if useful, produce a more speedy result."

So far as is known, Dr. Ellsworth was the first physician to make use of the gastric juice as a digestant, and John Carnrick undoubtedly was indebted to him for the suggestion, for he comproduce expulsion of the offending meat. The same method was Ellsworth published his findings. It is now known how much inspiration he received from Europe regarding pepsin.

The gastric juice was recognized as a local application of value long before it was thought of in any other capacity. Dr. Philip Syng Physick, of Philadelphia, the father of American surgery, as he has been aptly termed by his biographers, employed gastric juice in the dressing of "cancers, sloughing ulcers, for the removal of dead bone or flesh, for correcting offensive odors, and for yielding a healthful stimulus to the diseased surface."

Dr. Physick was a daring operator and a most resourceful surgeon. He was a graduate in Arts of the University of Pennsylvania in 1785, received the diploma of the Royal College of Surgeons in 1791, and was graduated Doctor of Medicine from Edinburgh in 1792.

He became Professor of Surgery in the University of Pennsylvania in 1805 and continued a member of the medical faculty many years.

Dr. Physick's originality was confined largely to surgery and surgical matters, and his discovery of the gastric juice as a curative agent was merely to assist him in his specialty. Apparently no one appreciated the importance of Dr. Physick's method of treatment despite his great reputation and influence, for we find nothing in medical literature to show that it was followed up or in any way perfected.

The mutations of time bring many strange occurrences in their wake, but we recall nothing in medicine which has changed more than the gastric juice. It first came to notice as a topical application for open, infected wounds, and then after remaining dormant as a medicament for nearly two score years was used as a solvent for food in time of dire extremity; later it had one of its principal ingredients removed to give to physicians a most useful assistant, and finally it formed part of an ideal digestant.

To John Carnrick's skill as a physiological chemist and to his diligence as a research worker is due in a great measure the perfection of pepsin. He took it as a crude product, practically as a constituent part of the gastric juice roughly set aside, and developed it into a refined medicinal agent. For more than 30 years Mr. Carnrick manufactured pepsin and pancreatin, the latter a mixture of the enzymes naturally existing in the pancreas of the hog or ox, consisting of aymlopsin, myopsin, trypsin and steapsin, and capable of converting not less than twenty-five

times its own weight of starch into substances soluble in water.

His observations lead him to the conclusion that, valuable as pepsin and pancreatin were, they lacked the necessary properties to effectually reach many of the cases in which they were employed.

In consequence Mr. Carnrick began a series of experiments twenty years ago to determine the correctness of his theories. He proceeded to separate the nucleo-enzymes of the salivary glands, peptic glands, the pancreas and the glands of Lieberkuhn and Brunner and the ferment extract of the liver and spleen, so that a given amount would contain a proportional quantity of the enzyme principles of all the digestive organs and would act like the secretions of the natural organs.

For a long period these experiments were carried out under Mr. Carnrick's supervision by Dr. E. J. Lederle, the present Health Commissioner of the City of New York, and at that time in charge of the physiological laboratories of Reed & Carnrick, which house is one of the oldest firms of manufacturing chemists in the country, having been established nearly 52 years ago.

After many months of experiments and observations, Mr. Carnrick determined that his new nucleo-enzyme combination was so far superior to pepsin and pancreatin alone that he placed it before the medical profession under the name of Peptenzyme. This product, formulated along lines physiologically correct, has proven its value as a distinct feature in the treatment of the disorders of the alimentary canal, especially as it reduces albumens, starches, fats and cane sugar to the proper state necessary for assimilation.

The fiftieth anniversary of the first manufacture of pepsin in this country cannot fail to be of interest to the thousands of its prescribers.

Society Proceedings

MONTREAL MEETING OF THE CANADIAN MEDICAL ASSOCIATION*

THE forty-fourth annual meeting was held in Montreal, on the 7th, 8th and 9th of June. It was not largely attended, the papers, however, being good. There were several subjects of a public character and of general interest discussed.

An unfortunate incident occurred at the opening of the annual meeting, when the President-elect, Dr. G. E. Armstrong, of Montreal, took suddenly ill on the eve of delivering his inaugural Address. Dr. Armstrong was hurried home, where it was seen that his illness was a severe attack of hepatic colic. Later on he recovered, and was able to preside over subsequent sessions of the Association.

Mayor Guerin welcomed the visiting doctors at the opening session, and spoke highly of the work of the medical profession. Principal Petersen welcomed the guests on behalf of McGill University.

Luncheon was served in the new medical building, following which the convention divided into sections. An interesting feature was the study of such eminently practical questions as the White Plague and pure milk. A garden party in the university grounds completed the day's programme.

The prevention of insanity was the subject dealt with by Dr. W. H. Hattie, of Halifax.

The chief preventible causes of insanity mentioned were useless worrying, the intermarriage of feeble-minded people, whom Dr. Hattie thought should be institutionally treated, and the abuse of alcohol. There are now 12,000 insane people in the Canadian asylums, who cost the country about two million dollars a year. Dr. Hattie suggested that incipient insanity should be treated in the general hospitals. The percentage of cases due to alcoholic excess was about 16 per cent., and cities

*With thanks to Dr. John Ferguson.

supplied 4 per cent. more patients than country districts, owing to the greater rush and worry of city life.

The ladies accompanying the members were entertained at a luncheon at the Hunt Club. The tables, which were laid for 125 guests, were effectively decorated with a variety of cut flowers.

The Garden Party given at the grounds of McGill University by the ladies' committee of the Canadian Medical Association in honor of the visiting ladies was very enjoyable. A large number of guests were present, but rain marred the pleasure of the occasion. A military band played during the afternoon, and refreshments were served in a marquee on the lawn, the tables being decorated in the McGill colors, with red and white peonies. The guests were received by Mrs. W. W. Chipman, Mrs. Birkett, Mrs. William Gardner, Mrs. Peterson and others.

That there is no pure natural drinking water left in Canada, and that all drinking water must be filtered if a recurrence of typhoid epidemics is to be avoided, was the sensational statement made at a largely attended meeting of the Medical Section.

Dr. T. A. Starkey, chairman, at a symposium on Typhoid Fever and water supplies by members of the Association, read a paper in which the foregoing statement occurred, and it was endorsed by all the other members present. In fact, the general trend of the papers read on the subject was to show that the typhoid epidemics of the past have all been due to water-borne infection, and that natural drinking water, which was once pure, has now all become more or less contaminated owing to the increasing density of the population.

The most prominent feature of past epidemics was considered by the meeting to be the fact that as soon as there was competent and complete supervision of the water supply the epidemic was stopped. The sole means of controlling an epidemic, they were agreed, must consist of either purifying or cutting off the water supply that has caused it. Filtration of all drinking water was strongy advocated as a preventive of typhoid.

Dr. Starkey cited an instance of a lake in Newfoundland, four miles long, into a corner of which one farm house, and one only, was drained. As a result the whole community that drew its water supply from that lake was infected with typhoid.

Dr. Starkey repeated that the Laurentian and all other sources of supply of drinking water were either infected or in process of becoming polluted. There was no natural drinking water left that could be relied on without filtration. Although the chlorine treatment of water was good, it could only be regarded as a stopgap. Filtration was the only real remedy.

The hope of the human race lies in the physician, according to Sir James Barr, consulting physician to the Royal Infirmary, England, who in a vigorous address before the Canadian Medical Association submitted that as nearly all diseases which flesh is heir to arise from the stomach, they might be prevented. If the public were only alive to their own interests, he said, they would pay medical men liberally for directing them in the paths of truth and in the ways of health rather than for treating their diseases.

"If," he further declared, "the money which is spent in the treatment of disease were devoted to the preservation of health, our huge hospitals would not be half filled, purveyors of synthetic remedies and artificial foods might find a suitable place in a home for the destitute, the necessity for surgeons and specialists would largely disappear, and physicians would be fully occupied in advising their clientele on the preservation of health and in looking after the aged."

Sir James admitted, however, that we are still a long way off the halcyon days when our hospitals will be pointed out as relics of a decadent age, but we ought to aim at transmitting high ideals to our successors.

In a sentence the lecturer showed how very much better prevention was than cure, and incidentally this led him to rap the surgeon.

"So far as preventive medicine is concerned," he said, "very little can be placed to the surgeon's credit. About the only diseases which they attempt to prevent are those which spoil their operations—erysipelas, pyæmia and septicæmia. The surgeons largely live on the failures of the physicians and general practitioners, and I hope they will not take any umbrage at what I say here and in other parts of this address. They can, if they choose, put down my remarks to envy, jealousy, and all uncharitableness, but I shall not acknowledge any malice. I in-

tensely admire their work and envy their fees, which are, like the falls of Niagara, magnificent.

"But the health of a nation is its most valuable asset, and the maintenance of health is of much more importance than the treatment of disease. The struggle for existence is not merely an individual question, but it is becoming more and more a national question, and the nation which produces the finest race is sure to win in the long run. As Prof. Arthur Thomson says, 'What children usually die of is their parents, and what a nation dies of is lack of men.' "

Those countries which have to a large extent suspended a selective death-rate, but are not wise enough to establish a selective birth-rate are certain to decay, and go the way of all the ancient nations who disappeared and made way for more vigorous races. You have got here a young country, a virgin soil, and you should see that it is peopled by a vigorous and intelligent race. You should shut out all degenerate foreigners as rigidly as you would exclude a mad dog. Do not follow our example, and make your shores a dumping-ground for the rubbish of Europe. I believe you have already got a fair share of degenerates, but your population is still small, and there should be no difficulty in eliminating the unfit in the course of a generation or two.

Above all, both for the prevention of insanity and consumption, discourage and prevent the propagation of the species by the mental and physical weaklings. Raise up a race which will not be catching tuberculosis or anything else. I would advise you, while showing all possible kindness to the insane and mentally defective, to give them clearly to understand that with them their breed must come to an end. Insanity and mental deficiency are largely questions of inheritance. With the insane, the imbecile, the idiot, the mentally defective, the criminal, the ordinary wastrel, the loafer, the professional pauper, the tramp, the footpad, the drunkard, and other mental and physical degenerates, prevention is certainly better than cure, but you will never succeed either in prevention or cure by maudlin sentimentality.

Sir James insisted upon the prevention of tuberculosis, and in reply to Dr. Osler's assertion that "we know that the disease is not hereditary," he said, "We know nothing of the kind, al-

though we are constantly having it dinned into our ears by medical men who ought to know better. We know that the tubercle bacillus, which is a necessary element in the production of tuberculosis, is not transmitted in the germ plasma, but the long, narrow, flat chest, delicate lungs, and feeble resisting power to the tubercle bacillus and to many other germs are undoubtedly inherited, just as much so as the shape of your nose or the color of your hair. Medical men who are shutting their eyes to the truth and encouraging matrimony and the propagation of the species of mental and physical weaklings are incurring a fearful racial responsibility, and their action should be condemned in no uncertain language."

On the subject of children's complaints the lecturer said: "It will be very difficult to prevent the spread of infectious diseases among children so long as we have overcrowding, defective ventilation, dust, and want of cleanliness in the homes, schools and public conveyances. However, a great deal can be done for local conditions by looking after the children's teeth, by seeing that their teeth and jaws get plenty of exercise in chewing food, by keeping their mouths and nasal passages as aseptic as possible, and by removing any obstructions, such as adenoids and large tonsils."

Referring to appendicitis, which he described as "a fashionable disease," Sir James Barr said it was significant that surgeons were never found to contract the complaint, and was of the opinion that if people were not so fond of keeping a cesspool in their interior the bacillus coli and other organisms would not become virulent, and appendicitis would be a comparatively rare disease.

"Pneumonia," he said, "is a common disease at the extremes of life, and, in the aged, it is often a terminal disease. Like typhus fever, it is a good racial disease—it kills the weaklings and, as a rule, causes no permanent injury to the survivors. The disease is short, and therefore inexpensive, so that no one makes much out of it, except the undertakers, who grow fat on the misery of others. The case mortality is high, but yet no serious attempt has been made to curtail its incidence."

Dr. George Armstrong presided at the lecture and concur-

red in a hearty vote of thanks which the large audience passed to Sir James Barr for his address.

Dr. Mackid, of Calgary, was elected President, and Calgary was chosen as the place of meeting for 1912. It is expected to hold one of the meetings in Edmonton.

Other officers elected to the Executive Council are: J. H. Elliott, Toronto; F. G. Finley, Montreal; Murray MacLaren, St. John, N.B.; Alex. McNeill, Summerside, P.E.I.; A. McPhedran, Toronto; I. Olmstead, Hamilton; R. A. Reeve, Toronto; F. N. G. Starr, Toronto; John Stewart, Vancouver; Dr. Halpenny, Winnipeg; Dr. Low, Regina; Dr. Whitelaw, Edmonton; Dr. Adami, Montreal; Dr. Mackid, Calgary; Dr. McKechnie, Vancouver.

THE FORTY-SECOND ANNUAL MEETING OF THE AMERICAN MEDICAL EDITORS' ASSOCIATION

Was held at the Alexandria Hotel, June 26th and 27th. It was opened by the President, Joseph MacDonald, Jr., M.D., of New York, who read his address.

Other papers were:

Relation of the Medical Press to the Public Health and Marine Hospital Service, by Walter Wyman, M.D., Surgeon-General.

The Advisability of Newspapers and Magazines Having Medical Editors on Their Staff, by Edgar A. Vander Veer, M.D.

Some Things I Have Learned as a Western Medical Editor, by Edward C. Hill, M.D.

The Future of American Medical Journalism, Once More an Optimistic Outlook, by William J. Robinson, M.D.

Some Elements of Success in Medical Journalism, by J. M. French, M.D.

The Medical Reporter From His Own Standpoint, by E. Franklin Smith, M.D.

Physical Therapeutics in the Medical Press, by Arnold Snow, M.D.

What Shall We Publish? by J. R. Phelan, M.D.

The Extension of Advertising in Medical Journals, by S. DeWitt Clough (by invitation).

Medical Expert Testimony, by R. B. H. Gradwohl, M.D.

Hospital Publications as a Factor in Medical Journalism, by George W. Kosmak, M.D.

The Literary Side of Medical Journalism, by T. D. Crothers, M.D.

Pivately Owned Medical Journals, by Henry W. Coe, M.D.

The Influence of Medical Journalism for Medical Progress, by W. Benham Snow, M.D.

Editorial Independence, by T. G. Atkinson, M.D.

The Harm and Criminality of Pseudoexpert Medical Evidence, by C. H. Hughes, M.D.

A Plea for Scientific Classification of Disease, by Winslow Anderson, M.D.

THE EDITORS' BANQUET.

Dr. William H. Welch, retiring President of the American Medical Association, launched, at the banquet of the Medical Editors' Association, a movement for an International Congress of Tropical Medicine in connection with the Panama Exposition. He declared the triumph of sanitation in the Panama zone was the greatest conquest of disease in modern times and that the medical profession must see this great achievement by Americans fittingly commemorated.

Dr. Welch came in late, with Dr. William C. Gorgas, who, as assistant surgeon-general of the army and member of the Isthmian Commission, is the particular American whose achievement there in practical application of the scientific discoveries of other Americans, in the line of tropical disease, Dr. Welch declared, should be a source of national pride. Both of them were received with honor by the medical editors, and each of them spoke, Colonel Gorgas briefly, and Dr. Welch at greater length in his plea for the celebration in San Francisco of what he declared to be at least equal to the triumphs of the engineers in building the canal.

Ninety-five persons were seated at the banquet tables of the Hotel Alexandria banquet room. Twenty-four of the guests were women—the wives and daughters of the medical editors and their noted guests.

Dr. McDonald, President of the Association, was toastmaster. Dr. Walter Lindley responded to the toast, "The Land of Sunshine and Good Cheer," and James Slauson, President of the Chamber of Commerce, welcomed the medical editors to Los Angeles.

Dr. Winslow Anderson, of San Francisco, spoke to the toast of California, and assured the visitors that after the convention was over another welcome awaited them in San Francisco. Dr. McDonald read a message of regret from Surgeon-General Wyman, who was to have spoken. Dr. Wyman was detained in New York, the toastmaster said, in the work of precaution to keep cholera from entering the port from India.

Dr. McDonald announced, with deep feeling, that Dr. J. J. Taylor, Secretary and Treasurer of the Association, was kept away by serious illness, from which it was feared he would not recover. At his request the banqueters stood and drank a toast to his recovery. Dr. Wallace C. Abbott, of Chicago, responded to the toast of "The Ladies."

Colonel Gorgas, who entered the banquet hall at this time with Dr. Welch, was introduced by the toastmaster as the greatest sanitarian in the world. Colonel Gorgas spoke only of the progress of the building of the canal, and not at all of his work there.

Rev. Dr. F. W. Clampitt, rector of Trinity Episcopal Church of San Francisco, spoke of the "Relation of the Clergy and the Medical Profession," paying high tribute to the practical lesson the medical profession is teaching the clergy in untiring energy and devotion to constructive work. He said that nowhere had he seen this lesson taught better than by the medical profession in San Francisco.

Here is the menu of the banquet:

"A good digestion to you all; and, once more, I shower a welcome on you; welcome all."—SHAKESPEARE.

Toke Point oysters, mignonette, "All the world's my oyster."—Relishes.

Celery, olives (Ripe and otherwise), almonds, Chicken broth, Viennoise, "The broth of human kindness counts."

Sherry.

Sand Dabs, Papillotte, "A succulent morsel though a strange."
Sauterne.

Filet of beef, Alexandria. "There's strength in every fibre."
Burgundy.

Punch, Crothers, "A light tap, not a knock out."

Roast squab. "A royal bird, fit for a king or a medical editor."

Moet and Chandon, white seal, very dry.

Salad Alexandria à la Anderson.

Potato soufflés à la Abbott.

Ice Cream, surprise, "To tickle the jaded palate."

Cigarettes, petit fours.

Cheese à la native, "A strong argument."

Demitasse, "All's well that ends well."

Cigars.

Officers, 1911-1912: President, Surgeon-General Wyman; First Vice-President, Dr. Thomas L. Stedman, of New York; Second Vice-President, Dr. Walter Lindley, of Los Angeles; Secretary and Treasurer, Dr. McDonald; Executive Committee, W. C. Abbott, M.D., of Chicago; *American Journal of Clinical Medicine*, C. L. Stevens, M.D., of Athens, Va.; *Pennsylvania State Medical Journal*, G. H. Kreidler, M.D., of Cincinnati; *Lancet and Clinic.*

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Militia and Naval Medical Services and Ambulance:

J. T. Fotheringham, M.D., Lieutenant-Colonel, Army Medical Corps, Associate Professor of Medicine and Clinical Medicine, University of Toronto; Associate Collaborator Chas J. Copp, M.D., C.M., Hon. Sec. Provincial Council of Ontario, St. John Ambulance Association.

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A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

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Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto.

Medicine:

J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:

Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:

J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:

N. H. Beemer, M.D., Mimico Insane Asylum. Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:

Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:

W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:

J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:

Percy G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Dermatology:

D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

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Editorials

HOT WEATHER AND UNIVERSITY EXAMINATIONS

Some of the pranks played by the hot weather in Toronto during the first week of last July were unprecedented. Unlighted wax candles resting in glass candlesticks in a well-ventilated parlor were bent at a right angle on July 3rd. On the same day a matriculant, who wrote on the algebra paper at the Jarvis Street Collegiate Institute, found, on rising, that the varnish of the chair he sat on had melted and the chair stuck to the seat of his trousers. He was not alone in this experience, other candidates at the matriculation and senior leaving examinations found practical demonstration of the melting point of varnish on their clothes that memorable day.

One feels like asking, if it was fair to those candidates to subject them to mental strain under climatic conditions of such severity? Or, to put it differently, would it not be fairer to the candidates to have these examinations held in May or June? We do not know if the matriculants of Calcutta University are obliged to present themselves for examination during the hottest season of the year in India; but we feel confident that students in Canada should not have been compelled to do their hardest work when the thermometer registered 102° in the shade.

Some race horses (geldings, for instance) show their greatest speed in hot weather, but boys and girls, who have to struggle with algebra, geometry, physics, etc., were placed in poor physical condition by the sultry heat of last July, and it was a positive cruelty to subject them at the same time to severe tests of scholarship.

The Honorable Minister of Education, who is a physician, should take some interest in this matter. It may suit the convenience of school inspectors or others who act as presiding examiners, to have the matriculation and leaving examinations held in July, but it would be more agreeable to the candidates and more conducive to good results if they were held in May or June. J. J. C.

THE TYPHOID EPIDEMIC AT OTTAWA

A FULL report on the typhoid epidemic in the City of Ottawa, which occurred in January, February and March of the present year, has been prepared by Dr. Hodgetts, Medical Adviser of the Commission of Conservation. The other members of the special committee, who co-operated with him in investigating the outbreak, were: Dr. R. W. Bell, Medical Inspector of the Ontario Board of Health; Colonel Jones, D.G.M.S., and Major Drum, D.P.H., P.M. M.C., both of the Militia Department.

The outbreak is accounted for by the unsanitary or abnormal conditions affecting the Ottawa water supply, just previous to the outbreak. Describing

these conditions in detail, it is shown that they were due to:

(1) The unusually low water in the Ottawa river.

(2) The meteorological conditions whereby, owing to its shallowness, the river became frozen to the bottom in places, blocking some of the ordinary channels and a freshet during the first week in January, 1911.

(3) The contamination of Nepean bay and the river above.

(4) The occurrence of typhoid fever in Mechanicsville (an adjoining village) last autumn.

(5) The opening of the emergency valve at Pier No. 1 (used during fires to increase pressure in the Ottawa water supply).

(6) The pollution of the old aqueduct by sewage.

(7) The possibility of the pollution of the water in its passage through the intake pipe.

(8) The effect of neglect to carry out Mr. Hazen's recommendation of October 15, 1910, re hypochlorite treatment.

The outbreak was of notable proportions. Of the 901 cases investigated by the committee, 52 died before March 18th, a mortality of 5.7 per 100.

After the hypochlorite treatment had disinfected the Ottawa water supply, or about the last week of February, there was a marked decrease in the number of cases, as was shown in the returns for the week ending March 11th, and the practical termination of the epidemic in the week ending March 18th.

The illustrations in the report showing the back

premises of some Ottawa houses reveal conditions indicative of the cult of Cloacina in a primitive and unrestrained manner. Other illustrations exhibit defective plumbing, as found in houses where cases of typhoid had occurred. No attempts had been made by civic inspectors to correct the defective conditions in the back premises or in the houses.

After the epidemic had started in Ottawa, secondary causes may have become operative in extending it. Thus, personal contact, the washing of uncooked foods and household utensils with infected water may have caused some cases of typhoid. The milk supply is not blamed.

Probably after the citizens of Ottawa have had enough of hypochlorite water, they will call for a filtered water supply. J. J. C.

A NATIONAL LABORATORY AT OTTAWA

In a despatch from Ottawa, June 12th, it is announced that the Government of Canada will take steps, shortly, to provide for the establishment of a national laboratory in connection with the Federal Department of Health. Last winter this matter engaged the attention of the National Conservation Commission, and it has also been urged in Parliament on several occasions.

The chief ground taken by the supporters of this scheme is that a Government laboratory would provide a cheaper and purer supply of bacterins, anti-

toxins, sera, etc., in Canada. It is also said that such a laboratory would establish and enforce standards of purity in these preparations, and, further, would provide means for experimentation with new medical discoveries. It is also stated that this laboratory would cover a wide field of educational work relating to municipal sanitation and other phases of health conservation—whatever that may mean.

The establishment, at Ottawa, of a national manufacturing laboratory by the Government of Canada is a matter of the greatest interest. For many years the analysis of foods, drinks, drugs, etc., has been done by the analytical branch of the Inland Revenue Department at Ottawa. It would be quite proper, therefore, to provide a bacteriological service for the testing and standardizing of such bacterins, sera, anti-toxins, etc., as are sold to the medical profession in Canada. It would be just as proper for bacteriologists to work in such a laboratory and to report their results as for Professor McGill, Chief Analyst, to test and report on samples of spiritus ætheris nitrosi or cream of tartar. Of course, it is open to the Government of Canada to install a factory for the manufacture of bacterins, anti-toxins, etc., although the necessity for such an employment of public funds is not apparent. If complaint had been made of the quality of the biological wares supplied to the Canadian profession by private concerns, it would have reached the ears of the medical press ere now. That complaints of the purity of bacterins, anti-toxins, sera, etc., sold by private concerns have not been

made is proof that these products are not open to criticism in that respect. The medical profession of Canada is not calling for the establishment of a Government factory for the manufacture and sale of such products.

Who are the interested parties? The parties at the back of the suggested enterprise are some public officials who have no capital to invest in it, or are afraid to make the venture on their own account. They are willing to devote their talents to the public service and, in respect to a Canadian manufacturing laboratory, would place it in opposition to well-managed, successful private concerns, but they want Father Canada to pay the bill.

In the matter of biological products, used in the treatment of the diseases of man, the supply is ample and sufficient for both the United States and Canada. Canada is also most fortunate in obtaining supplies of these goods from the United States, where provision is made for inspection by Government officials, without discrimination as to where the goods are shipped. Under these circumstances additional tests made in Canada might seem a work of supererogation; but would be useful as offering every reasonable guarantee. It would be a mistake, however, for the Canadian Government to organize and run a factory for the manufacture and sale of human biological products, in opposition to well-organized private concerns. J. J. C.

PERSONALS

The late Richard P. Smith, of Strathroy, left $20,000 to the Sarnia Hospital.

Dr. Arthur W. Mayburry sailed by the "Mauritania" for Europe July 5th.

Dr. W. T. Sheriff, of Hazeldean, has been appointed Medical Health Officer of Ottawa.

Dr. Reid, of Toronto, has been elected a fellow of the Royal College of Surgeons of England.

Dr. A. J. Brown, of Holstein, has gone to Britain for a year, where he intends taking up special work.

The Hamilton Council has taken steps to have the terms of the Pure Milk Act incorporated in a civic by-law.

Dr. Thomas J. Rigby, who was accused of having performed an illegal operation, was acquitted by Magistrate Kingsford.

Dr. James A. McCammon, of Gananoque, has been appointed sheriff of the United Counties of Leeds and Grenville.

The Ontario Medical Association passed a resolution calling upon general hospitals furnishing some accommodation for consumptives.

The Ontario Medical Association will ask that the Canadian Medical Association will only admit through a local or provincial society.

The University of Toronto medical graduates of the class 1901 held the second reunion at the Prince George, Toronto, Thursday evening, 1st June.

Dr. J. H. Elliott left Toronto June 26th for his summer practice at Port Carling and the Royal Muskoka. He will return about September 15th.

The lady doctors of Toronto dined at McConkey's on the evening of 5th June. There were thirty present. The president of the society, Dr. Margaret Johnston, occupied the chair.

The County Council of Waterloo has granted $5,000 each to the Berlin and Galt hospitals for the additions that are to be built this year. There is also a grant of $1,500 to each for maintenance.

Dr. Wilfrid T. Grenfell, the noted medical missionary among the Labrador fishermen, had the degree of medicine, *honoris causa,* conferred upon him by the University of Toronto at the recent commencement.

The profession of Toronto and elsewhere sincerely regret the serious accident to Dr. Geo. Bingham through a runaway on July 8th. Though at first it looked more serious, the genial and popular surgeon has nothing more than a compound fracture of the tibia and fibula to contend with, and all unite in the hope that he will be up and around again in the course of three months time.

News of the Month

HOMEWOOD SANITARIUM

The profession will be pleased to learn that, before very long, Homewood Sanitarium, Guelph, will arise from her ashes greater and better than ever. The directors are now putting up in all five buildings:

First—A handsome Administration Building.

Second—New Manor Building, to hold forty-four patients, divided equally between the sexes, for voluntary patients. This building itself will cost $70,000.

Third—A handsome dining room and kitchen building. This building will contain a series of eight dining rooms, for employees and patients, all centered around a serving room. They are spending $3,500 in tiling the serving room and kitchen. Underneath the dining rooms they are arranging for a series of five or six large rooms for Arts and Crafts. This building will cost $40,000.

Fourth—A large building for twenty patients of the chronic class.

Fifth—An ideal bungalow, for the accommodation of twelve patients of both sexes of the acute class.

These, together with the two present buildings, will make a series of seven buildings running for one thousand feet along the top of the hill. The expenditures will involve at least $200,000 at the time these new additions are completed.

TWENTY-FIFTH ANNIVERSARY

Dr. Willy Merck, of E. Merck, Darmstadt, celebrated on June 1st the twenty-fifth anniversary of his entry into the firm as a partner. The occasion was made a festive one, and all work was suspended for the day. In the morning employees and

workers assembled in one of the buildings of the works to bear testimony by their presence and their congratulations to the *entente cordiale* which exists between owners and employees, and which is characteristic of the condition of work at Merck's. Dr. Willy Merck was the recipient of a magnificent art glass vase presented to him by the employees. The workers, of whom he is the direct chief, as the whole of the manufacturing (as well as the scientific) laboratories are under his personal supervision, expressed their congratulations in an illuminated address.

Representatives of the Hessian Government, of the town of Darmstadt, and of numerous chemical works joined in the shower of congratulations. In the name of the Grand Duke of Hesse (a son of Princess Alice), the representative of the Government handed to the "Jubilar" the Grand Gold Medal for Art and Science conferred upon him in recognition of his services not only in promoting the advance of chemical research work and in developing this branch of the country's industry, but also as a distinguished patron of art.

In the evening employees and owners joined in a "Kommers," and the day closed by celebrating the event in true German fashion with what might be termed "the family circle of the firm."

The Physician's Library

International Clinics. A Quarterly. Edited by Henry W. Cattell, A.M., M.D. Vol. I. Twenty-first series, 1911. Philadelphia and London: J. B. Lippincott Company.

A volume of 296 pages with index, the present volume under the new editor is full of good articles on timely subjects. Poliomyelitis is discussed by Charles K. Mills and Joseph S. Neff, and the papers contain much that is new and fresh. Wechselmann contributes 17 pages with plates on 606; most of this has appeared elsewhere, but the article is well written. Zeller discusses the spread of pellagra throughout the United States in an illustrated article. He gives a good resumé of this subject which just now has aroused such fears in the Southern States. Modern Infant Feeding is written by Ostheimer. Carl Beck and others write on a number of interesting surgical subjects, while there is a general review of progress in Medicine, Surgery and Treatment. The volume should find many readers during the summer months. J. H. E.

A Text-Book of Gynecological Surgery. By Camyns Berkeley, F.R.C.P. (Lond.), M.A., M.B. (Cantab.), and Victor Bonney, F.R.C.S., M.D.; with 392 figures in the text from drawings by Mr. Bonney and 16 colored plates. New York: Funk & Wagnalls Company, 1911.

This splendid exposition of the British methods of operative gynecology should be in the hands of every surgeon who attempts the practice of that specialty.

The work sets forth in a very clear and concise manner not only the indications for the various operations, but also the preoperative preparation, operative technique, and post-operative treatment, with their complications and appropriate treatment.

The rather unique methods of illustrating the successive steps of an operation by means of black and white drawings are very helpful. Many new methods are suggested, such as trachelo-

plosty for bad lacerations, and methods of myometomy will commend themselves to the thoughtful surgeon.

Altogether one has no hesitation in saying it is the best and most up-to-date book on gynecological surgery that has appeared in some time. The last chapter is interesting in giving some valuable statistics of the results, immediate and remote, of the various operative procedures. A. C. H.

Disease in the Bone and Its Detection by the X-Rays. By Edward W. H. Shenton, M.R.C.S. (Eng.), L.R.C.P (Lond), Sen. Surg. Radiographer, Guy's Hospital. With illustrations. Macmillan & Co., Limited, St. Martin's Street, London. 1911.

This book of sixty-eight pages deals with the application of X-ray methods to the treatment of disease in bone, including tuberculous, malignant diseases and chronic inflammatory trouble. There can be no doubt of the fact that the use of the X-ray is a valuable adjunct to clinical methods of examining patients with bone and joint diseases. If anyone has any doubt in this matter they will be readily convinced by an examination of the beautiful X-ray plates reproduced in the work at present under review. The author makes some interesting observations as the result of the study of a series of fractures under the care of Mr. Lane of Guy's Hospital. The entire absence of callus is a constant feature of these cases of fracture treated after Mr. Lane's method of plating. This is a very interesting fact as illustrating the factors which go to produce callus formation. The illustrations of new growth in bone, as well as the illustrations of tuberculous disease, are most interesting, and this little work will be found very instructive to practitioners who have to deal with pathological conditions in bone. A. P.

The Practical Medicine Series, comprising ten volumes on the year's progress in medicine and surgery under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School; Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume X. Nervous and Mental Diseases, edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Poli-

clinic, Clinical Professor of Nervous Diseases in the Northwestern University Medical School; ex-President Chicago Neurological Society; Peter Bassoe, M.D., Assistant Professor of Nervous and Mental Diseases, Rush Medical College. Series 1910. Chicago: The Year Book Publishers, 40 Dearborn Street.

This little work is divided into two parts, one treating of Nervous Diseases and the other of Mental Diseases. In the first division, under the heading of "Symptomatology," Sir William Gowers refers to symptoms of epilepsy which are related to structural diseases of the organs of the so-called special senses and shows the importance of careful examinations to discover a structural basis; olfactory, auditory and visual aura may precede the seizures, and are strongly suggestive of organic diseases. Under the heading of Nervous Diseases, Doctor William McDougall discourses upon fatigue, both local and general, and shows that it is due either to the diminution of the quantity of disposable energy or to an increase of the function of resistance which should protect the energy. Most interesting examples are cited to illustrate the function of increased resistance and the danger of its too frequent repetition. Under the heading of Diseases of the Brain and Meninges and Spinal Cord much new material is exhaustively and entertainingly reviewed. Under Mental Diseases Dr. Adolf Meyer reviews The Problems of the Physician concerning the Criminal Insane and Borderland Cases, and he deals with the legal aspects of insanity under the following heads: 1st, Commitments; 2nd, Legal and Testamentary Capacity; and 3rd, Criminal Responsibility. Following this he gives a summary of the report of the committee appointed by the American Medico-Psychological Association to investigate this question, which report was presented at the Washington meeting last year. N. H. B.

Tono-Bungay. A Novel. By H. G. Wells. New York: Duffield & Co., 36 West 37th Street. $1.50.

Tono-Bungay contains impressions of life as seen by a man who, from boyhood to manhood, had been engaged in ascending through different strata of English society. In the story Tono-Bungay, a well-advertised patent medicine, proves to be the

fairy which introduces "my uncle" Edward Ponderevo to the world of high finance, in which he becomes a luminary. For a time the inevitable catastrophe grips the inventor of Tono-Bungay, who drops to earth like a man falling out of an aeroplane, and, after all his schemes, dies far from home and country, asking his nephew if there is a hereafter.

The nephew dabbles in science when he is not helping his uncle to bamboozle the public, and develops some skill in making flying-machines and destroyers—an occupation which provides a soft place for him to fall on after the financial collapse of the inventor of Tono-Bungay.

By the way, however, "my uncle's" nephew is a bit of a Don Juan, who contrives to do some realistic love-making with three fair ladies, illustrating the grand passion in different strata of English society.

The author seems happiest in painting scenes from servant-life—as, for instance, the supper in the housekeeper's room at Bladesover, when the boy George first meets the girl Beatrice.

J. J. C.

Clinical Lectures on the Acute Abdomen. By William Henry Battle, F.R.C.S., Surgeon to St. Thomas's Hospital, and Joint Lecturer on Systematic Surgery in the Medical School; Formerly Surgeon to the Royal Free Hospital; Assistant Surgeon to the East London Hospital for Children; Hunterian Professor of Surgery at the Royal College of Surgeons of England; "Orator" of the Medical Society of London, 1910; author (with Mr. E. M. Corner) of "The Surgery of the Diseases of the Appendix Vermiformis and Their Complications," etc. London: Constable & Company, Ltd., 10 Orange Street, Leicester Square, W.C. 1911.

This small volume of one hundred pages contains a series of lectures given in the Clinical Theatre at St. Thomas's Hospital, London, by Mr. Battle. The lectures consist of a series of practical talks on such conditions as acute appendicitis with peritonitis; perforations in different parts of the digestive tract; acute intestinal obstruction; diseases of the female genitive organs; some of the more rare causes of acute symptoms in the abdomen, and, lastly, some neuroses which may cause symptoms of urgency.

The value of these lectures consists in the fact that they represent the practical experience of the author in the class of diseases referred to, and it will be found useful as a guide to the individual practitioner who may be called upon in an emergency to open the abdomen when a diagnosis is somewhat obscure and when acute symptoms demand immediate surgical interference.

A. P.

Plaster of Paris and How to Use It. By MARTIN W. WARE, M.D., New York, Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor of Surgery in the New York Post-Graduate School. Second edition revised and enlarged. Price, cloth, square form, $1.25; de luxe leather, $2.50. Surgery Publishing Co., New York.

This little work of one hundred pages forms a good, practical guide to those who wish to use plaster of paris for the purpose of fixation of the limbs or the trunk. In these days when plaster of paris is being employed so extensively and replacing many of the other methods formerly used for fixation purposes this work will be found of value to those who have not already acquired the necessary manipulative skill for the application of plaster splints.

A. P.

A Manual of Gynecology. By THOMAS WATTS EDEN, M.D., C.M., Edin., F.R.C.P. Lond., F.R.C.S. Edin.; Obstetric Physician with Charge of Out-patients, and Lecturer on Midwifery and Gynecology, Charing Cross Hospital; Surgeon to In-patients, Chelsea Hospital for Women; Physician to In-patients, Queen Charlotte's Lying-in Hospital; Examiner in Midwifery and Diseases of Women to the University of Oxford and to the Royal Army Medical College. With 272 illustrations in the text. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1911.

This is a very convenient work of 632 pages, including the index. The type is clear and paper good. The illustrations, 272 in number, are all good and very helpful to the reader.

This is not an exhaustive work, but represents the practice and experience of the author. It is a good work for the young graduate and the general practitioner. We are glad to note that

in gonorrheal infections the author speaks favorably of vaccine in chronic and resistant cases and that frequently he points out how much more may be learned by the rectal examination than the vaginal only. W. J. W.

Ehrlich and Hata. The Experimental Chemotherapy of Spirilloses. London and New York: Rebman & Co.

Nothing in the history of medicine has probably at any age so caught the attention of profession and public alike as the work of the wizards of science whose names appear as authors of this little work. The whole subject is treated in illuminative style, from the experimental basis up to the concluding remarks on the chemistry, the results and outlook, and the practical application of "606." The index is perfect. The work should be at once secured by every physician whose ambition is to keep abreast of the progress of the day. J. T. F.

The Corner of Harley Street, Being Some Familiar Correspondence of Peter Harding, M.D. London, Constable & Co., Ltd. 1911.

To any one, and especially the physician, acquainted with "Old London," a book bearing such a title as "The Corner of Harley Street," will be of immediate interest. All of us know that Harley Street, London, is essentially the physician's street of that metropolis, many of the most famous of England's medical men hailing from that locality. The "correspondence" in this little volume is most interesting, having a touch of "Old London" that should, alone, mean for it a considerable sale. We know that our readers will derive a lot of pleasure during the coming dog days in perusing "The Corner of Harley Street."

W. A. Y.

Food and the Principles of Dietetics. By Robert Hutchison, M.D., Edin., F.R.C.P., Physician to the London Hospital and The Hospital for Sick Children, Great Ormond St., London. New York: William Wood & Co.

The popularity of this work is marked by the fact of its having reached the third edition a little more than a year after the publication of the second. It is an excellent book, covering a vast field of observation and ripe experience.

The almost total neglect of the subject of Dietetics in ordinary medical education makes it imperative for every physician in active practice to have a work of this description at his command. Too much stress cannot be laid on the weakness, particularly of the young practitioner, of his knowledge of feeding, adult and infantile, in health and disease. The author treats his subject with a clearness and decision that is most convincing. The chapters on patent foods deal fairly and honestly on their merits. That on Dietetic "Cures" and "Systems," Baths, Water Cures, etc., is excellent. Many capital recipes are given for food preparations, plain and predigested. We cordially endorse the work and feel, at the very moderate price of $3.00, it to be an excellent purchase. A. B.

Health Hints and Health Talks. By E. R. PRITCHARD, Secretary of the Chicago Department of Health. The Greatest Wealth is Health. Publishers: The Reilly & Britton Co., Chicago.

"The greatest wealth is health. The health of a people is its most precious asset. Health is priceless, and yet without price. Therefore, health knowledge, the knowledge that enables us to avoid needless sickness, is, without doubt, the most valuable knowledge we can have.

In "Health Hints and Health Talks" this sort of information is given in language so plain and simple that all may understand and profit thereby.

1,000 *Surgical Suggestions.* Practical Brevities in Diagnosis and Treatment. By WALTER M. BRICKNER, B.S., M.D., New York, Adjunct Surgeon, Mount Sinai Hospital; Editor-in-Chief *American Journal of Surgery.* With the collaboration of ELI MOSCHCOWITZ, M.D., JAMES P. WARBASSE, M.D., HAROLD HAYS, M.D., and HAROLD NEUHOF, M.D., New York, Associate Editors *American Journal of Surgery.* Fourth American Edition. New York: Surgery Publishing Company, 92 William Street. 1911.

This book is a *multum in parvo.* In its pages will be found a large collection of practical hints regarding surgical treatment, each suggestion being based upon actual experience.

The "Suggestions" are arranged in such a manner that the

desired subject can be at once referred to and found. From a mechanical standpoint, the book is a credit to the publishers. It is brimful of pointers to the surgeon, and well worth the price charged—a one-dollar bill. W. A. Y.

Gonorrhea in the Male. By Abr. L. Wolbarst, M.D., Consulting Genito-urinary Surgeon, Central Islip State Hospital; Visiting Genito-urinary Surgeon, People's Hospital, West Side German Dispensary and Beth Israel Hospital Dispensary; Professor of Genito-urinary Diseases, New York School of Clinical Medicine; member American Urological Association, etc. Published by the International Journal of Surgery Co., New York. 1911.

This is a book for the general practitioner as a guide to diagnosis and treatment of gonorrhea. It is entirely original and based entirely on the author's large experience. All the known methods of diagnosis are carefully described and, where possible, illustrated. The treatment is modern and up-to-date and nothing is recommended that has not proved useful in the author's experience. Special attention is paid to the curability of gonorrhea with reference to its influence on marriage.

The author makes a strong plea for more gentle and conservative methods of treatment, and believes much harm is done by many of the prevalent methods. W. J. W.

A Practical Medical Dictionary of Words Used in Medicine. with Their Derivation and Pronunciation, including Dental, Veterinary, Chemical, Botanical, Electrical, Life Insurance and other special terms; Anatomical Tables of the Titles in general use and those sanctioned by the Basle Anatomical Convention; Pharmaceutical Preparations official in the U. S. and British Pharmacopeias and contained in the National Formulary; Chemical and Therapeutic Information as to Mineral Springs of America and Europe and Comprehensive Lists of Synonyms. By Thomas Lathrop Stedman, A.M., Editor of the "Twentieth Century Practice of Medicine," Editor of the "Medical Record." Illustrated. New York: William Wood & Co. 1911.

Dr. Stedman deserves to be congratulated on the very useful

work he has placed at the service of his confreres. Probably no medical book gives greater satisfaction than a good dictionary, which gratifies our curiosity without prolixity, and with the least expenditure of time and trouble. The publishers have done their share of the work very commendably. J. J. C.

Aids to Pathology. By HARRY CAMPBELL, M.D., B.S., Lond., F.R.C.P., Senior Physician, West End Hospital for Nervous Diseases; late Physician and Pathologist at the North-West London Hospital. Second Edition. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1911.

The known facts of pathology are the ones that the student should be familiar with, and the writer has done his best to place them in the most concise form for his readers.

The second edition contains, as new matter, a chapter on "Diseases of the Heart," and many of the other chapters have been very much enlarged.

Although this book is small, it contains a wonderful amount of the most valuable matter, and no student who is fond of the study of disease should be without it, and for the general practitioner it is a book that is so easily read and so interesting that in a few minutes an outline of the general pathology of any condition can be obtained. A. J. J.

Coroners' Procedure at Inquests and Investigations.

We take pleasure in announcing Dr. Arthur Jukes Johnson's new work, "Coroners' Procedure at Inquests and Investigations."

There has not been, so far, any authoritative guide for coroners. A few years ago it was found that many criminals escaped because post-mortems were not properly made and reported. Dr. Johnson then prepared a form to be used by doctors making post-mortems in medico-legal cases. This form has been adopted in the new Act.

The author has been forty years a coroner, and holds the position of Chief Coroner for Toronto. He has been intimately connected with the holding of inquests and investigations for many years.

His book contains all the forms and explains all the pro-

cedure, so that no user can go wrong at an inquest or investigation. It takes him step by step through his duties, anticipating whatever circumstances may arise. The price of the book in cloth binding is $2.50. It can be had from the Canada Law Book Co., 32 Toronto St., Toronto.

Tuberculosis as a Disease of the Masses and How to Combat It. Seventh American edition, enlarged and revised, with 64 illustrations. Prize Essay. By S. Adolphus Knopf, M.D., New York.

We have been favored by the author with a copy of this excellent work on tuberculosis. Perhaps no physician in America has given a greater amount of careful study to the question of tuberculosis "as a disease of the masses and how to combat it" than Dr. S. A. Knopf, of New York City, and we feel sure that his seventh revised edition will have as kindly a reception at the hands of the profession as have the previous editions.

Gynæcological Therapeutics. By T. Jervois Aarons, M.D., Edinburgh. Balliére, Tindall and Cox, London. 1910.

Sir Halliday Croom says of this book: "To my mind Dr. Aarons has produced a volume of the greatest practical value."

With the greatest respect for so eminent an authority the present reviewer feels compelled to ask to whom it could be of practical value? From a firm which has published such notably good books as that of Rose and Carless, and from a city like Edinburgh, surely we had a right to expect something better. It carries one back to the time when gynæcology, instead of being the most advanced and the most progressive branch of surgery, was in largest part a routine of palliative medication and topical tinkering. To name a diseased condition and then to give in wearisome detail prescription after prescription for its treatment is medieval—not modern.

Why for example devote nearly half a page to a formula for treating the nervous and circulatory disturbance of the menopause and repeat the full prescription with ergot added, where hemorrhage called for control. All that is essential could have been easily given in a couple of lines. Medical books, like medical teachers, fall into two classes. One tries to tell just what should

be done, the other stimulates the hearer or the reader to think out for himself the best line of treatment and to follow it intelligently.

Of the first class we have always too many, while of the second we have never had enough. This is a book of the first class, but it is not a first-class book. N. A. P.

The Second Chance. By NELLIE L. MCCLUNG. Toronto: William Briggs.

Just the story for the idle hour of the warm midsummer. Crude perhaps, but charming, this little sketch of the child-woman "Pearlie Watson," the fun of her irresistible, and the pathos a heartache. Like an April day, the story keeps one guessing whether the next chapter will be "blinking" or shining. W. A. Y.

The Eagle's Feather. By EMILY POST. Publishers, Toronto: William Briggs.

The story of a genius, his love of his art and his love of a gifted and beautiful woman. The story is well written and full of interest, the drama of life, over-wrought with ambition and the written drama with its climax, are very much worth while burning the candle to read by until it flickers and goes out.

The Grain of Dust. By DAVID GRAHAM PHILLIPS. Publishers, New York and London: D. Appleton and Company.

It has been said that Phillips possesses the qualities of sincerity and intelligence. Only for this reason have his novels been read at all. Had he been spared he might have done better work. Certainly his posthumous book is hardly the last word a man of his discernment would have cared to be only held in remembrance by. Many may read it, few will remember it, and none will cherish it. W. A. Y.

Oxford Medical Publications. "606" in Theory and Practice. By PROFESSOR P. EHRLICH and J. E. R. MCDONAGH, F.R.C.S. Henry Frowde, Oxford Univ. Press. Hodder & Stoughton, Warwick Sq., E.C., London. 1911.

The usual mechanical excellence of the Oxford Medical Publications is fully maintained in this new volume, and is exceeded

only by the fullness and lucidity of the authors' work. The wizard who gave us such unexampled results in the control of the ravaging spirocheta pallida tells here the tale of his work, in such style that he who runs may read and profit by it.

J. T. F.

The Practical Medicine Series. Vol 2. General Surgery. Edited by Dr. John B. Murphy, Chicago. 1911. Canadian Agents: The J. F. Hartz Co., Ltd., Toronto.

The volume on general surgery in this series has for many years been prepared by Dr. Murphy. Its value to the surgeon has grown with each successive issue. So long as it shall please Providence to spare Dr. Murphy for this work, and it shall please him to do for us what he has been doing, no safer investments can be made than the purchase of these volumes as they are issued. Hollinger, even for those who got in at three-fifty, does not make any better return.

The editor and his assistants pass in review the world's surgical literature, the really important papers are noted and commented upon, and the trend of surgical progress for the year is well brought out. Incidentally it becomes clear that the editor, while one of the hardest working of surgeons, finds time to keep closely in touch with the best that others are doing. More than that, he helps us to keep from falling behind by having missed papers which notably advance surgical knowledge or which make surgical success more easy of attainment.

This reviewer has to thank the general surgery volumes of the Practical Medicine series for many things which have become a part of his diagnostic or operative technique, and which first came within his ken through Dr. Murphy's annotations. As an example of editorial comment the following may be quoted:

"Ether is rapidly displacing all other means for general anesthesia. Its administration is facilitated by first using nitrous oxide. The 'drop' method on the open mask has superseded all other modes of administration. The number of deaths reported from chloroform during the past year has very materially diminished and bears a direct relation to the infrequency of its use."

N. A. P.

A PURE GRAPE JUICE, PARTICULARLY SUITABLE FOR USE BY THE SICK

THERE is perhaps no class of men who know better than physicians how refreshing and palatable, especially to the fever patient, is a little iced grape juice, particularly during the warm weather. That a pure grape juice contains medicinal qualities there is no question, being not only exceedingly refreshing and invigorating, but mildly stimulating in character. Medical practitioners have recognized for years the value of the juice of the grape in the treatment of many forms of sickness, though more especially in the treatment of typhoid fever and other disorders of the intestinal tract, where the tongue becomes coated and parched, and where it is found injudicious to allow the administration of solid food. The writer has known of several cases of typhoid fever where the only food administered was a grape juice, one case in particular where the patient could not digest milk in any form. In Switzerland and Germany there have of recent years been opened establishments known as "Grape Cure Establishments," and where those who have suffered from gastric or intestinal trouble go to have a cure effected, with wonderful results.

There are a number of grape juices on the market, some good and some quite indifferent. One of the really good ones is that pepared by Mr. E. D. Smith, of Winona, Ontario. Mr. Smith bottles nothing but *the pure* expressed *grape juice*. He is anxious that the medical profession should become acquainted with this product, and invites physicians to try it for themselves, and when satisfied that it is all that he claims for it, to prescribe it for their patients. This Grape Juice can be procured at almost any drug store or direct from the manufacturer, and is worthy of more than passing notice.

A MOST CONVINCING ADVERTISEMENT *

THE attention of the readers of this journal is called to the advertisement appearing across the lower half of page lx of this issue. Nothing could prove better than this announcement the purity of the City Dairy Company's milk, or be more convincing as to its freedom from bacteria. It must certainly be most gratifying to the company to receive such a communication.

*Publisher's Department.

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Original Contributions

THE MEDICAL PROFESSION IN ONTARIO. A LEGAL AND HISTORICAL SKETCH*

BY THE HONOURABLE WILLIAM RENWICK RIDDELL, L.H.D., ETC., Justice, King's Bench Division, High Court of Justice, Ontario.

The history from a legal point of view of the medical profession in our Province is interesting both to physician and to lawyer. I have in some instances gone to the original sources, but make no pretence to originality: much of what I write has been said before by others (particularly by Dr. Canniff), and some by myself.

Our Province began its independent career as a separate Colony in 1792, having theretofore from 1763 been part of the Province of Quebec, which included a vast territory composed of what is now Quebec and Ontario and also the whole hinterland of the English colonies down to the mouth of the Mississippi.

Full legislative power was given to Upper Canada by the Constitutional Act, 31 George 3, C. 31, which separated the Province from the rest of British America.

At the time of this separation of our Province and for some time thereafter, there was no regulation as to who should practice medicine, or "physic," as it was called. Many of the practitioners were old army or navy surgeons, some were importa-

*Prepared for the Ontario Medical Association meeting, May 31, 1911.

tions from the United States, but most of those who treated disease were mere empirics. There had, indeed, been an Act or Ordinance passed by the Council of the old Province of Quebec in 1788, forbidding anyone to practise without a license from the Governor, which license was to be granted without an examination to all graduates of any British university and to all surgeons of the army or navy—but this was largely a dead letter in the newer parts of the colony, as our country was at that time.

In 1795, the Provincial Parliament of Upper Canada passed an Act, 35 Geo. III., c. 1, forbidding the sale of medicine, prescribing for the sick and the practice of physic, surgery or midwifery by anyone who had not been licensed. The Governor was to appoint a board to examine all who should apply for a license, and those approved of by them upon the examination were to be granted a license—the fee being £2 currency, *i.e.*, $8. A penalty of £10, *i.e.*, $40, was imposed for selling medicines, prescribing for the sick or practising physic, surgery or midwifery without a license. An exception was made for surgeons or surgeons' mates in the army or navy, and for those who had been practising at the time of the passing of the Act of 1791—these however, were not to take apprentices or students. There is no record of anything ever having been done under these provisions; the Act was found unworkable, and it was accordingly repealed in 1806 by 46 Geo. III., c. 2, and the profession was again much at large, although the Act of 1788 already spoken of was still nominally in force. Much public dissatisfaction was the result, and at length a new Act was passed in 1815, 55 Geo. III., c. 10, which forbade prescribing for the sick or the practice of physic, surgery or midwifery without a license—saving the case of graduates of a university in British Dominions, surgeons and surgeons' mates in the British army or navy and those who had practised before 1791. The prohibition against these taking apprentices or students was not repeated in this Act, nor was the prohibition against selling, etc., medicines. And it was expressly provided that women might practise midwifery without a license. The Governor was to appoint an examining and licensing Board.

Nothing seems to have been done under this Act either; and it was repealed in 1818 by 59 George III., c. 13, which, however, contained much the same provisions. A board of five was to be

A CLINIC BY PROFESSOR AGNEW.

appointed to hear and examine all persons who desired to practise physic, surgery and midwifery, or either of them, and, if satisfied, certify the same to the Governor, who would, if satisfied of the loyalty, integrity and good morals of the applicant, grant a license. But women were still to be allowed to practise midwifery without a license, and graduates of a British university and army and navy surgeons and surgeons' mates were still favoured. The Governor's Private Secretary was to receive 20 shillings—$4, for each license.

A slight amendment was made in 1819 by 59 Geo. III., c. 2, whereby each applicant was to pay 10 shillings to the Secretary of the Board.

The first meeting of the Board took place January 4th, 1819, Messrs. James Macauley, Christopher Widmer, William Lyons and Grant Powell, surgeons, being present; and the next day, John Gilchrist, of my own old Township of Hamilton, was examined and received a license to practice physic, surgery and midwifery. This gentleman was one of a well-known family of physicians, and was known in Cobourg and vicinity as "Dr. John." This Board, with a short interruption, continued to sit (with, of course, from time to time changes in personnel) until 1865. They examined with some rigor and granted certificates, sometimes for one, sometimes for two and sometimes for all three branches of the profession. Of those rejected, instances are to be found of many deficient in Latin and classical knowledge, several with a diploma from the Faculty of Physicians and Surgeons of Glasgow (one of whom was "quite ignorant of chemistry and pharmacy"), one with a diploma from the Apothecaries' Hall, one who had served five years' apprenticeship to an army surgeon, etc. It is quite plain that the examination was no mere formality.

In 1827, by 8 George IV., c. 3, the Act was amended and new provisions introduced—all those holding a license or diploma from a British university, or from the Royal College of Physicians or of Surgeons, London, or a commission or warrant as physician or surgeon in the British army or navy, were entitled to a license without examination; also those residing in Upper Canada before the war of 1812 who remained in the Province during that war and produced a certificate of their

THE SHIP'S COCKPIT.

competency from three or more licensed practitioners. Practising without a license was made a misdemeanor.

In 1839, by 2 Vic., c. 38, all previous legislation was repealed, and those who had been members of the Board under the previous Acts were formed into a corporation to be known as "The College of Physicians and Surgeons of Upper Canada," of which the members were to be Fellows: all other persons then or thereafter authorized to practise physic, surgery and midwifery were to be Members of the College—and the College was to license. Provision was made that women might practise midwifery and that all with a diploma or license from any British university or from any College or Faculty of Physicians or of Surgeons in the United Kingdom, and also all army and navy surgeons, should receive a license, etc., etc.

The Fellows met from time to time, but owing to the efforts of the Royal College of Surgeons, London, the Act was disallowed by the Home authorities in 1840: and the former Act came into force again.

A new Board was commissioned by the Governor (Lord Sydenham) : and examining and licensing went on as before.

In 1841, by 4 and 5 Vic., c. 41, it was provided that any person who was or should be licensed or authorized as a physician or surgeon, or both, either in Upper Canada or in Lower Canada, should be authorized to practise also in the other province.

In 1859, the statute 22 Vic., c. 47, recognizes for the first time homeopathy as a lawful system of medicine—five gentlemen (among them Dr. John Hall of Toronto) were appointed a Board to examine according to the doctrines and teachings of homeopathy—they issued a certificate upon which the Governor granted a license as in the case of practitioners of the regular school.

The Acts were consolidated in 1859, Con. Stat. U. C., cc. 40, 41.

The Thompsonian or Botanic School, which was founded by Samuel Thompson in the '30's, and which had in the course of evolution become the Eclectic School, received legislative recognition a little later. In 1861, 24 Vic., c. 110, a Board of seven gentlemen (amongst them my own old preceptor, Richard Hare

Clarke, M.D., of Cobourg) was formed to examine according to the doctrines and teachings of Eclectics. They were to certify, and the Governor to license, as in the case of the homeopaths.

All these Boards were abolished in 1865 by Act, 29 Vic., c. 34, which formed a "General Council of Medical Education and Registration of Upper Canada," composed of one representative from each of the colleges authorized to grant medical degrees—the University of Toronto, of Queen's College, of Victoria College and of Trinity College, and the Toronto School of Medicine, and also twelve elected by the profession. After the 1st of May, 1866, every practitioner was to be registered under this new Act —those entitled to registration were those formerly licensed in Upper or Lower Canada those certified from the four Upper Canadian universities or any university in British Dominions, those having a diploma of the R. C. Surg., L., or R. C. Phys., L., registered under the Imperial Medical Act or commissioned as physician or surgeon in the British army or navy. The Council might fix the matriculation standard, and also the curriculum to be observed by the medical colleges.

This made the medical profession of all schools into one body in law.

An amending Act was passed the following year, 1866, 29 & 30 Vic., c. 54, chiefly affecting matriculation and the standard of medical studies.

Upper Canada ceased to exist and Ontario was born, 1st of July, 1867—less than two years thereafter the law was again changed: 32 Vic., c. 45, incorporated the profession into "The College of Physicians and Surgeons of Ontario," formed a Council composed of one representative each from the University of Toronto, Queen's University, University of Victoria College, University of Trinity College, Royal College of Physicians and Surgeons (Kingston) and Toronto School of Medicine: twelve representatives to be elected by the Regular School, five by the Homeopaths and five by the Eclectics. A Register was provided for; and all those actually practising before 1st January, 1850, and all those already registered, etc., were to be placed upon the Register; but for all future aspirants, a Board of Examiners was provided, to be elected by the Council, one from each teaching body and nine from other members of the College; and

EDWARD JENNER
1749 - 1823

neither Homeopath nor Eclectic was to be examined in Materia Medica, Therapeutics, Theory or Practice of Medicine or in Surgery or Midwifery (except the operative practical parts thereof) by any but those approved by the representatives on the Council of his School of Medicine. The curriculum, etc., was fixed by the Council.

The repealing Act of 1874, 37 Vic., c. 30, re-enacted most of the provisions of the former Act of 1869, without substantial change—a provision is made for Homeopathic students attending Colleges in the United States or Europe, and the five Eclectic members of the Board were to continue such for five years, but to have no successors.

The Act of 1887, 50 Vic., c. 24, changes the Council—one member each is to be chosen by the University of Toronto, Queen's University, University of Victoria College, University of Trinity College, the Royal College of Physicians and Surgeons (Kingston), the Toronto School of Medicine, Trinity Medical School, the Ottawa University, Regiopolis College and the Western University.

But while in the Act of 1874, the Council had power to refuse to register or remove from the register only those who had been convicted of felony, by this Act this power is given in cases in which the accused has been convicted either in Her Majesty's Dominions or elsewhere of an offence which if committed in Canada would be a felony or misdemeanor, or has been guilty of any infamous or disgraceful conduct in a professional respect. This provision has been considered by the courts on a recent occasion.

The provisions of the Act of 1891, 54 Vic., c. 26, are of no great importance: that of 1893, 56 Vic., c. 27, increased the representation of the regular profession to 17 members, and reduced the term from five years to four.

By the Act of 1895, 58 Vic., c. 28, the power of fixing tariffs was taken away from the Division Associations.

The number of representatives was increased from 17 to 18 by the Act of 1910, 10 Edw. VII., c. 77, which also excused the Council from the duty of making enquiry when any Court of Record in the Province had decided that any practitioner had committed a criminal offence in connection with his profession—

A PORTRAIT OF KOCH.

upon receipt of proof of such decision, the Registrar was immediately to erase his name from the Register.

Education and Medical Schools.

In early days there were no medical colleges or schools in Upper Canada. Apprentices and students were received by practitioners; and those desiring to attend medical lectures were compelled to go to McGill, or to the United States or the mother country. What became the medical faculty of McGill seems to have been founded as a private enterprise in 1823 or 1824, and it became a College of McGill University in 1828.

Of those submitting themselves for examination by the Medical Board of Upper Canada, some produced diplomas from the College of Physicians and Surgeons, Glasgow: others from the Apothecaries' Company, London; the Royal College of Surgeons, Edinburgh; the Royal College of Surgeons, Dublin; the Royal College of Surgeons, London; McGill College; University of Paris; University of Edinburgh; University of Maryland; University of Pennsylvania; University of Berlin; and tickets from lectures at Bowdoin College, Dartmouth College, *Fairfield College, University of New York, Berkshire Medical Institution (Massachusetts), Geneva Medical College (New York), University of Glasgow, Borough Hospital (London), Jefferson Medical College, Willoughby University (Ohio), &c., &c.

A University for Upper Canada had been projected as early as 1795. A Charter was obtained from George IV, 15th March, 1827, for the University of King's College, "at or near our Town of York in our said Province of Upper Canada," with power to grant degrees of Master of Arts and any degree in Divinity, Law or Medicine. This Charter was amended by the Provincial

*Fairfield Medical College began in 1809 as an unincorporated institution, known as the Academy of Medicine of Fairfield, at a small village, Fairfield, not far from Little Falls, N.Y. In 1812 it was granted a charter by the State Legislature, under the style "College of Physicians and Surgeons of the Western District of the State of New York," known as Fairfield Medical College. This, it is said, was the sixth medical college organized in the United States. From 1813 to 1839 lectures were given at Fairfield, Frank Hamilton delivering his first course of surgical lectures at its last session. Geneva Medical College, of Geneva, N.Y., had been chartered in 1834, and its first course of lectures was given in 1835. When Fairfield Medical College closed its doors (which it did after the session of 1839-1840) some of its Faculty, including Hamilton, joined the staff at Geneva. This College continued until 1872, when it removed to Syracuse, N.Y., becoming the Medical Faculty (College of Medicine) of the Syracuse University. This is still in active operation, with an attendance of about 150 students.

A SPOONFUL EVERY HOUR

Legislature in 1837, March 4th, by the Act 7, Wm. IV., which annexed Upper Canada College and abolished religious distinctions and tests. The foundation stone was laid April 23rd, 1842, and the University formally opened June 8th, 1843, with (amongst others on the staff on paper) Professors of Chemistry, Anatomy and Physiology, Materia Medica, Obstetrics, Practical Anatomy and Surgery.

Lectures begun in January, 1844, with a staff in fact of six Professors—namely, Professors of Anatomy and Physiology, Theory and Practice of Medicine, Principles and Practice of Surgery, Obstetrics and Diseases of Women and Children, Materia Medica Pharmacy and Botany, and Practical Anatomy respectively. It is interesting to note that Dr. J. H. Richardson, so well known, and whose memory is so dear to many of us, was one of the two matriculated students at that first session. Dr. Richardson had previously studied under Dr. John Rolph in Rochester, N.Y., where this extraordinary man was practising, having been obliged to leave Upper Canada owing to the troubles of 1837. Dr. Rolph came back to Toronto in 1843, and took students who did not intend going to the University, and prepared them for the Medical Board. This resulted in his founding the "Toronto School of Medicine," certainly before 1848, and this school was incorporated in 1851 by Act 14 & 15 Vic., c. 155. No degree-conferring powers were granted, however.

The name of the University was in 1849 changed to the University of Toronto by the "Baldwin Act," 12 Vic., c. 82, and its completely non-denominational character established. In the following year, certain medical men organized another School of Medicine, "The Upper Canada School of Medicine." So that in 1850 there were in Toronto three schools of Medicine—the University Faculty of Medicine, the Toronto School of Medicine (Rolph's School), and the Upper Canada School of Medicine (Hodder's School). This last, during the same or the following year, became the Medical Faculty of the newly established Trinity University; and had its locus on the west side of Spadina Avenue just north of Queen Street.

The Medical Faculty of the University of Toronto did not last long thereafter. The Act of 1853, 16 Vic., c. 89, limited the functions of the University to examination and graduation, and

instituted a College—University College—for Arts teaching, providing (Section 32), that after 1st of January, 1854, there should be no Professorship or Teachership of any of the branches of Medicine or Surgery except as part of a general system of liberal education. This provision the political gossip and scandal of the day charged as being due to the influence of Dr. Rolph, whose School was supposed to be suffering from the competition of the State University.

Rolph's School became, in 1855, the Medical Faculty of Victoria University; and having originally been at 53 Queen Street, in 1854 it removed to Richmond St. between Yonge and Bay Sts., and in 1857 went to the new College buildings in Yorkville.

Soon, too, the Trinity Faculty lapsed (that is, in 1856), and advantage was taken of the charter which Dr. Rolph had obtained in 1851, but which was now no longer needed for his school, to organize a new school, in form and name a continuation of the old Toronto School of Medicine. This began operations in 1857 in affiliation with the University of Toronto; and Dr. Hodder soon took its presidency. He resigned this position to become Dean of the new Medical Faculty of Trinity University, which was organized in 1870-1871; but the Toronto School of Medicine continued under Dr. W. T. Aikins as President.

The Victoria Faculty lapsed in 1875; and the Trinity Medical Faculty became a separate body, "Trinity Medical School," by Statute in 1877, 40 Vic., c. 65.

The Ontario Medical College for Women began operations in 1884-1885 in Toronto, and another in Kingston a little later—while the Western University Medical Department at London was in operation by 1882-1883.

In 1887 the Toronto School of Medicine became, in substance, the Medical Faculty of the University of Toronto (though retaining its identity), and in 1903 the two Medical Schools, the Toronto School (then, in fact, the Medical Faculty of the University of Toronto) and the Trinity Medical College or School, became one, and were united as the Medical Faculty of the University of Toronto. The Ontario College for Women continued until 1906. In that year the University Medical Faculty arranged to provide women students with all the facilities enjoyed by men. The *raison d'être* of the College for Women thereupon ceased and that College closed its doors.

ARMY SURGEONS AT WORK IN THE WAR IN THE PHILIPPINES.

The Western University School still is in active operation.

The Medical College at Kingston began as the Medical Faculty of Queen's University.

A University with the name "The University of Kingston," had been incorporated by Provincial Act, 3 Vic., c. 35, in connection with the Church of Scotland, with power to confer degrees in all Faculties. This bill was disallowed by the Home authorities—for what had Presbyterians to do with a University? —but in 1841 the young Queen granted a charter to an institution under the name of "Queen's College at Kingston;" and that body was made the recipient of all the property of "the University at Kingston" by 9 Vic., c. 89.

The Medical Faculty of the new University began lectures in 1854, graduating its first class in 1855. In 1866, however, the Medical Faculty separated from the University, having obtained legislation for that purpose, and the legislature having created a new Corporation, the Royal College of Physicians and Surgeons at Kingston, affiliated with Queen's University. This body again united with the University in 1892 and has since continued a Faculty of the University. The Women's Medical College at Kingston was also merged.

Anatomy.

In olden times there was no provision for obtaining subjects for dissection, and many were the grewsome stories told about "resurrection men," and about doctors and their students robbing new-made graves. Some of these stories had a modicum of truth, but most were sheer fabrications.

In 1843 for the first time the Legislature interfered. The Act 7 Vic., c. 5, recites that it is impossible to acquire a proper or sufficient knowledge of surgery or medicine without a minute and practical acquaintance with the structures and uses of every portion of the human economy, which requires diligently pursued courses of dissection—and then provides that the bodies of those found dead publicly exposed, or who immediately before their death had been supported by or in any public institution, should—unless the person so dying should otherwise direct—be delivered to teachers of anatomy or surgery, either public teachers or private teachers having at least three pupils—and provided that *bona fide* friends or relatives might claim the bodies

for interment. An Inspector of Anatomy was to be nominated for every city having a Medical School, who should keep a register of all unclaimed bodies given up for dissection and also of all medical men qualified to receive cadavers for dissection, inspect the dissecting rooms, &c., &c., being paid £1 5s.—$5—for each body.

In 1863, by 26 Vic., c. 42, patients dying in a provincial lunatic asylum were excepted—they were to be decently interred.

The Act of 1885, 48 Vic., c. 31, gave the relations or *bona fide* friends of the deceased 48 hours to claim the body—and ordered the medical school receiving a body to keep it for five days; and if claimed within the five days it was to be given up. It was also forbidden to send or take any body out of Ontario for anatomical purposes.

In 1889, by 52 Vic., c. 24, the time for friends, &c., to claim a body was reduced to 24 hours—and these are now the provisions of the law. See R. S. O. (1897), c. 177.

The first dissecting room in Toronto seems to have been built in 1843 or 1844 for the Medical Faculty of King's College—and that Faculty first occupied a frame building on the north or west of the west wing of the College building.

Hospitals.

There was certainly a Military Hospital at Kingston from the time the British first took possession of that part of Canada. I do not find any record of a hospital in Toronto until about 1812, although no doubt one did exist—in 1819 an advertisement appeared in the official Upper Canada Gazette asking for tenders to build a Brick Hospital in the Town of York—it was erected soon after and acquired some note, the building being occupied for several sessions by the Legislature after the fire of 1824 had destroyed the Parliament Buildings.

In 1830 an Act was passed authorizing a grant of £100 to this Hospital.

In 1830 a public meeting was held at Kingston to build a public hospital, while in 1832 the Medical Board of Upper Canada speaks highly of the Hospital at York (Toronto), and the opportunity it affords medical students of observing diseases and their treatment. In this year the York Dispensary was established, but died in a year for lack of funds.

LITHOTRITY
(After the operation)

In 1844 the Board of Trustees of the Toronto Hospital offered the whole of the upper flat of the Hospital to the Medical Faculty of the University, but the terms could not be agreed upon. It then had a whole block of land bounded by King, Adelaide, John and Peter Streets.

By 1850 there were in Toronto not only the Toronto General Hospital, but also the Toronto Eye Infirmary (S. E. corner of Church and King Streets), the Toronto General Dispensary and Lying-in Hospital (established in 1848) and two other Maternity Hospitals.

Ever since the times I have been writing about, the Toronto and Kingston General Hospitals have been utilized by the teachers in the Medical Colleges for clinical instruction. So also in London for the Western University Medical Faculty.

THE UNWELCOME GUEST.

"B. A., M. B.", OR ONLY "M. B."

JOHN HUNTER, M.B., TORONTO.

At the recent meeting of the Ontario Medical Association two of its members, while discussing one of the papers, paid a tribute to its literary, as well as to its scientific, excellence. One went so far as to say that he hoped the time would soon come when no student would enter medicine without a degree in Arts. Meeting outside the room, the other said to him: "What rot you talk about medical students taking an Arts course. They have got to earn their living." The physician who said this is, from experience, and from opportunities for observation, as well qualified to express an opinion on the literary culture essential to an accomplished physician as any in the medical profession, hence the significance of his words.

Bemoaning his own illiteracy, as well as that only too conspicuously evident everywhere among the "rank and file" of the physicians of Canada, the writer has been, for years, a persistent advocate of an Arts course as the standard for matriculation in medicine. Such a statement from a very highly esteemed old classmate came somewhat as "a bolt from the blue," but "as no man is ever defeated until he gives up," the writer decided to place this question of a far higher standard—a degree in Arts—for matriculation in medicine before the readers of this journal in the faith, and hope, that it might elicit a frank and a profitable discussion.

Want of space, as well as inability on the part of the writer, limit this article to the brief discussion of two out of the many aspects from which it could be viewed. These are:

1st. What advantage has the tutored intellect over the untutored one?

2nd. What potent attributes has the B.A., M.B. over the M.B.?

In regard to the first question, some estimate of the value of mental discipline is readily comprehended from the difficulty students find in "settling down to work" after the holiday

THE NEW ACADEMY OF MEDICINE, QUEEN'S PARK, TORONTO

Photo by N. A. Powell, M.D.

season. Nights, if not even weeks, seem to be almost wasted in a futile effort to get the mind under control. Memories of "the summer-resort girl," boating, ball games, etc., prove most distracting to college youths. Want of mental discipline is always the enemy of intellectual acquisition. The untrained youth in athletics is under no greater handicap in competing with the trained athlete than is the illiterate student with the undisciplined mind, in acquiring knowledge, as compared with one disciplined by previous mental culture.

In the pursuit of medical, as of any other kind of knowledge, haste is the enemy of accomplishment. Haste is a strain, it is unphysiologic, and therefore morbid. "They must earn their living," is, after all, only a deceptive excuse; it can never be used as a legitimate reason for any youth to rush unpreparedly into medicine.

Assuming that the literary equipment—no matter how or where obtained—that a course in Arts ought to stand for, be made the standard of matriculation in medicine, what advantages would accrue to the medical student?

His knowledge of Latin and Greek would be an aid in understanding the fuller significance of technical terms: *e.g.*, many anatomical names are derived from objects, such as a boat, a sword, a cube. When the student is already familiar with the Latin or Greek name of the object, he has a clearer outline of the anatomical structure. This holds true for the more ready acquisition of knowledge pertaining to every branch of medicine, for its foundations were laid centuries ago, when these languages were in constant use for the communication of scientific knowledge. French and German are essentials in modern medical education.

The science of medicine "is a labyrinth whose mazes will tax, as they may well engross, the mightiest of minds. Wisdom is justified of all her children. Science must have her analysts before she can arrive at syntheses, must take to pieces before she can put together again into the larger, new-created forms. And one is not to blame for wishing to approach medical science with the broadest outlooks, farthest reaches, and deepest insights possible to him."

What potent attributes has the B.A., M.B. over the M.B.? In

TRINITY UNIVERSITY
ST HILDA'S COLLEGE
TRINITY COLLEGE
TRINITY COLLEGE SCHOOL Port Hope
TRINITY COLLEGE.
TORONTO.

estimating the influence a physician exercises in a community while pursuing his vocation many factors have to be considered; *e.g.,* personality, social position, wealth, political and civic acumen. The chief factors, however, are the thoroughness and vastness of his scientific and literary culture. By adopting the tactics of the blatant charlatan, a poorly qualified and illiterate physician may obtain patients; or the physician of average ability and culture may, by persistent plodding, attain "a mediocrity of success," but the full volume of success and the stable reputation come only as the legitimate rewards of high scientific and literary accomplishments. Galen, Harvey, Hunter, Virchow, Trousseau, Lister and Osler are names that bear ample testimony to the value of scientific and literary culture.

Humanity is a very complex organization, and the physician, in common with any other citizen, only discharges a part of his duty in following his vocation. The majority of the people he meets do not require medical aid, but as citizens all require help, the rich as well as the poor. The national, municipal, social and religious atmospheres are always surcharged with problems pressing for solution. Which of the two physicians would be the better qualified to give an intelligent and rational answer to any of their questions—the scientific and literary, or the unscientific and illiterate one? The physician who has chosen his vocation simply "to get a living out of it," is in the same class with the "mining exploiter" and "real estate booomster." He makes no contributions from either experience or research work, to medicine. He is rarely, if ever, seen at a medical meeting. He leads a parasitic life, "lying in wait" for his neighbor's patients when the latter is away attending meetings or taking a post-graduate course. The medical profession is over-burdened with physicians who are satisfied if they can only make a fairly good living out of their vocation.

What can the B.A., M.B. do to remove or, at least, mitigate this untoward condition of things? His wider range of intelligence fits him for leadership. He should assume the full responsibility of a leader and discharge his obligations. If he cannot be a leader, or, worse still, if he is unwilling to try to become one, he is an unworthy alumnus of his Alma Mater. It takes culture, courage, tireless industry, self-sacrifice, meekness and

MAIN BUILDING UNIVERSITY OF TORONTO.

patience in anyone who assumes the responsibility of leadership, yet

> "No lonely action nobly done
> But is as stable as the sun."

The wail of the Canadian medical heart to-day is for competent leadership. In medicine, as in every other vocation, the path of the leader may be narrow, straight and up-hill all the way, but at the summit there awaits him the laurel wreath—fragrant emblem of achievement and of victory.

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J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

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Perry G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

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Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

SCENE IN QUEENS' PARK, TORONTO, DOMINION DAY 1911.

Editorials

OUR ILLUSTRATED NUMBER

Our last illustrated number met with such a kindly reception from the profession at large, that we venture to respond again to the demand of the moment and incorporate in this issue some half tone illustrations of subjects of immediate interest to students of Medical Science, and also a few Canadian views.

It may be called a fad, a fancy, or a development of the art "Sense;" but the love of looking at pictures seems to belong to the people of the time, running the scale all the way from the crude picture post card announcing one's tarrying place, up to the few most precious possessions of "The House Beautiful." The ethical magazines of recent years have so frequently reproduced little spots of the Canada that is so lovely, that even illustrations in a journal can give just a glint and a gleam of this Wonderland. People abroad first clung to the one idea of this country as an emblematical cake of ice, then they changed the idea and now clutch at a bag of flour—and remark stentoriously—"The Granary of the World." After all, Canada is enchanting because of its infinite variety.

We sincerely hope that our slight holiday digression from the pen to the pencil may afford, to our subscribers, a moment's passing pleasure.

W. A. Y.

MILITARY REVIEW, RIVERDALE PARK, TORONTO.

THE DIETETICS OF CARDIOPATHS

Dr. Pavil Ribierre writes entertainingly of the dietetics of cardiopaths, in *Paris Médical,* 1er juillet, 1911. He begins by advising everyone who has a heart lesion to eat and drink moderately. In reference to drinkables he holds that mistakes are often made by cardiopaths, who think that, in order to cause vigorous action of the kidneys, large quantities of milk, diuretic teas, mineral waters, etc., should be consumed. The excessive drinking of liquids transiently augments the mass of the blood, increases the work of the heart, and hastens its breakdown. Patients of this class should be restricted to from 17 to 29 oz. of liquids at each of the two principal meals, and a cup of some lukewarm infusion during the afternoon.

More than all others, cardiopaths should shun alcohol, the use of which weakens the myocardium; a half a glass of wine, diluted with water, taken at the two principal meals, should be the maximum—beer, cider, liqueurs and alcoholic bitters should be forbidden. The water used should be filtered, and, if necessary, boiled. Cardiopaths with tachycardia and extrasystole, with painful subjective feelings, should not use tea or coffee. The moderate use of these infusions may be permitted to others who are not so affected; but three cups during the twenty-four hours would be an excessive amount. To order an exclusive milk diet, a vegetable diet or a diet of

SCENE IN HIGH PARK, TORONTO.

milk and vegetables would be a therapeutic error, in the cases of young cardiopaths, whose daily toil calls for a substantial diet. Meat should be allowed them at the mid-day meal. It may be red or white, but should be fresh. Preserved meats, pork-butcher's meat, high meats, game, except fresh partridge, should be forbidden. Fresh-water fish may be permitted; salt-water fish, shell fish, lobsters, crabs, etc., rarely. Vegetables and fruits, creams, fresh cheese, may be permitted; bread, the digestion of which is often difficult, should be used moderately. Such a diet should not admit of a supplementary ration of milk. A cup of milk, with or without chocolate or cocoa, should constitute the early morning breakfast. In extreme cases a second glass of milk may be permitted in the evening or during the night; but, as a drink during meals, milk should be forbidden to a cardiopath, whose diet is in general almost normal. Otherwise, superalimentation and dyspepsia will result, and the outbreak of cardiac disorders will be precipitated.

In the early stages of valvular cardiopathy, when the elimination of chlorides is normal, salt should not be altogether eliminated from the diet; but, as soon as a regulated diet is adopted, moderation in the use of salt and in foods rich in salt, such as bread, meat extracts, meat bouillons, pork butcher's meat, salt-water fish should be recommended. Instead of overloading the stomach with an absolute milk diet, consisting of three or four litres of milk a day, containing 1.50 grammes of salt per litre, a better plan for

INSTITUTION FOR THE BLIND, BRANTFORD.

establishing diuresis in œdematous, asystolic cardiopaths, and also in certain cases of Bright's disease, is to reduce the amount of liquids absorbed in one day to 28 oz. of milk. The daily quantity of milk should never exceed 52½ oz. The best liquids are ptisans or pure water. The solids are potatoes, carrots, green peas, French beans, celery, artichokes, salads, rice, a little roasted or broiled meat, unsalted butter, and bread made without salt.

An insufficient milk diet viz., 1000-1200 grammes of milk a day suffices for an asystolic cardiopath. If the disordered state of the patient is prolonged or is repeated, a dechlorinated diet should be employed. The patient should be weighed regularly; for a steady or continuous increase in weight corresponds to a retention of the chlorides. The amount of chlorides taken by the patient and the amount eliminated should be estimated, after a period of equilibrium has been established by a preceding stage of dechlorination. A patient who has had an asystolic crisis with the retention of chlorides should, after the crisis is over, be considered to be in danger of an upset of the equilibrium of the chlorides. Dietetic supervision should apply to him, guided by analysis of the urine, and regular weighing. In such a case, monthly treatments consisting of a reduction in the amount of liquids absorbed and a dechlorinated diet should be adopted.

In arterial cardiopathies, such as cardiac sclerosis, aortic atheroma with valvular lesions, the dietetic problem is made more complex by the inter-

BRANTFORD HOSPITAL.

vention of factors unknown in simple valvular cardiopathies, the principal ones being arterial hypertension and renal insufficiency with its multiple consequences. Here there cannot be a question of a stage of adaptation; for, from the moment when the disease can be diagnosed, circulatory equilibrium is broken. The primary dietetic indication is to forbid the use of high meat, game, spices, *foie gras,* lobster, crabs, alcoholic drinks. Even fresh meat should be used only once a day at the most. From time to time the use of meat should be given up altogether during several days, and a return to the use of meat should be made very gradually. Short periods devoted to a fruit diet or a milk diet will be useful. Liquids taken in moderation should be restricted to pure water or milk.

In the last stage of cardiopathy, always more or less associated with uremia, the physician should have recourse to a strict water diet, kept up for thirty-six hours, forty-eight hours, or even longer. A litre or a litre and a half of water, containing 50 grammes of sugar of milk per litre, may be given in divided doses every twenty-four hours.

J. J. C.

THE ANNUAL MEETING OF THE ONTARIO MEDICAL COUNCIL

SEVERAL important matters of business engaged the attention of the Ontario Medical Council at their annual meeting last July. The question of the rep-

ST. JOSEPH'S HOSPITAL, PETERBOROUGH.

resentation of colleges, which do not give instruction in medicine, naturally came up for discussion, and two university representatives lost their seats, viz., Dr. F. N. G. Starr, representative of Victoria University, and Dr. W. H. Pepler, representative of Trinity University. Both these gentlemen are members of the teaching staff of the University of Toronto, and, *ipso facto,* disqualified from sitting as members of the Council. Regarding the representatives of colleges which are not engaged in teaching medicine, the Credentials Committee of the Council took the ground that the eligibility of such representatives to membership should not be decided, owing to the ambiguity of the Act, and in view of the new legislation to be applied for and the promised reorganization of the Council. As is well known, there are but three centres of medical education in Ontario, viz., the University of Toronto, Queen's University of Kingston, and the Western University of London, and they are really the only institutions of learning entitled to send representatives to the Council. A special committee, appointed at this meeting to report on the question of representation, stated that it could not complete its duties at the present meeting, so that the reduction of membership was left over till next July. It is the general opinion, however, that a reduction in the number of university representatives will take place, and it is pretty certain that a reduction will also be made in the number of the territorial representatives as well.

Dr. Ryan, Kingston, successfully advocated the

abolition of dual examinations in a resolution providing that the primary and intermediate examinations of the Council, written and oral, be conducted by the Universities of Ontario; the final examination on medicine, surgery, midwifery and diseases of women by the Council. An effort was made to secure a reduction in the license fee from $100 to $75, but this amendment was rejected.

A higher standard in examinations was adopted, and all candidates will be required to make sixty per cent. instead of fifty per cent., as was formerly the case, in order to pass each examination. Those who fail must, in future, pay a $20 fee to write a second time, and, failing twice, the fee will be raised to $25. The matriculation fee is fixed at $25, instead of $20, as was formerly the case.

A revision of the Medical Register was decided on. Candidates who had failed in the intermediate, but who had succeeded in the final examination this year, were allowed to pass, so that 92 candidates were thus permitted to secure the license. One hundred and nine had failed to pass the intermediate examination; of these seventeen had failed in the final examination and thus gained nothing.

Probably the most notable resolution passed was one asking the Government to introduce legislation to make the Canada Medical Act operative in this Province.

The fall supplemental examination will be held on the first Tuesday in November in final subjects only, and examinations in Toronto, London and Kingston on the last Tuesday in May, 1912.

The examiners appointed for the fall are: Drs. A. S. Lockhart, Harrowsmith, and F. J. Burrows, Seaforth, clinical medicine; Dr. J. D. Balfour, London, and Dr. W. E. Harding, Brockville, diseases of women; Dr. A. F. Tufford, St. Thomas, and Dr. P. Stuart, Guelph, surgery.

The following were appointed examiners for the Council: Dr. J. D. Balfour, London, and Dr. P. Stuart, Guelph, in surgery; Dr. W. T. Connell, Kingston, and Dr. Lockhart, Harrowsmith, in medicine; and Dr. R. H. Arthur, Sudbury, and Dr. W. Goldie, Toronto, in midwifery. J. J. C.

DEBATABLE POINTS IN DR. J. B. MURPHY'S PRESIDENTIAL ADDRESS

In a very able address given at the Los Angeles meeting of the American Medical Association, Dr. J. B. Murphy, President-elect, expressed some rather debatable views. He upbraided physicians for not turning themselves into lecturers, who discuss the ins and outs of disease with patients. He contended that patients are just thirsting for information about their complaints, and that the success of the quack, the bonesetter, the chiropractor, depends on glibness of tongue and readiness to teach people their theories, beliefs and sophistries. There may be something in this view. Perhaps, instead of putting in a library and an expensive office equipment, the physician should develop his powers of exposition

and thereby become "a beacon to assist the layman in the selection of a skilful practitioner." Of the 55,000 members of the A. M. A. who take the *Journal,* how many will hire halls and give lectures to convert the American people to medical orthodoxy? The question answers itself. That a word in season, an apt illustration of the patient's situation, would be proper, no one will deny; that it is physically impossible to practise medicine or surgery, even with obtuse people for patients, without conveying by speech, gesture, or facial expression, a reason, or working hypothesis, for the results the practitioner attempts to obtain is obvious. To suppose, however, that the practitioner should, after diagnosticating a complaint, strike an attitude and thrill the listeners with a speech about its mysteries is not practical. If the patient is really ill, he will not stomach long speeches. If the ailment is not serious, why should the physician feebly imitate the quack, whose forte is a brass band?

Dr. Murphy asserts that "Medicine has taught nothing to the public about the real truths or principles of scientific medicine."

In this Province since 1882 the Provincial Health Board by pamphlets, reports, abstracted in the lay press, by meetings held in different towns, the proceedings of which have been reported in the papers, has made it its business to teach the public "the truths or principles of scientific medicine." Dr. Murphy may not be acquainted with the literature of the Illinois State Board of Health, the New York

BONSECOURS CHURCH, MONTREAL

State Board of Health, the Pennsylvania State Board of Health, the Massachusetts State Board of Health, which for over one generation at least have instructed the American people in the truths and principles of scientific medicine. We know that, long before the Ontario Health Board was instituted, the State Board of Health of Michigan, under the guidance of Dr. Henry B. Baker, its accomplished Secretary, was a pillar of light to the people of Michigan in "the truths and principles of scientific medicine."

Listening to medical oratory is not necessarily a painful process; but a scientific medical practice, based on that oratory, sometimes hurts. What about vaccination? It has been preached even to satiety, and yet, are not American citizens, educated and uneducated, trying to save their cuticle and the cuticles of their children from the vaccinator's lancet? Would Dr. Murphy advocate public lectures on venereal diseases, or on the castration of the unfit?

Dr. Murphy recommends that the Council on Health and Public Instruction of the Association should supply the lay press with articles giving the people plain information on the nature, etiology, means of transmission, and early signs of disease, etc. This is just what the State Boards of Health have been doing, but, if the American Medical Association wants to join in the chorus of information about the truths and principles of scientific medicine, the value of that assistance will be duly appreciated. To the newspapers it will be useful, for they do want articles on medical topics; but they prefer

to get original ones, instead of being obliged to clip articles from the medical journals. Yes, certainly the newspapers will be delighted if Dr. Murphy and the Committee on Public Instruction will supply plenty of good copy. There is just one point worthy of consideration in this matter of writing articles for the lay press—let us have no pseudonyms. When Dr. John Smith writes a novel he may take the pseudonym which pleases him; but when he practises medicine on the lay press, he ought to do so over his civil name, the same which appears on his diploma, or leave himself open to the charge of practising medicine illegally. J. J. C.

PERSONALS

Dr. Herbert Bruce recently spent a couple of weeks down the St. Lawrence.

Dr. Cassidy and his family are, as usual, enjoying their summer home at Long Branch.

Dr. R. A. Reeve has again been honored, this time by the University of Birmingham conferring upon him the degree of LL.D.

Dr. and Mrs. W. B. Thistle returned two weeks ago from the Georgian Bay. This seems a favorite trysting place for members of the profession.

Dr. Howard Kelly, of Baltimore, and Dr. N. A. Powell have been enjoying together the fishing, the story and "the laughter that comes after."

Dr. Burnett-Smith (Anna Swan's husband) passed through Toronto recently en route to the West. He will likely stop a short time here on his way home.

ROYAL VICTORIA COLLEGE FOR WOMEN, McGILL COLLEGE, MONTREAL.

Dr. Hereward Livingstone has opened offices at 418 Bloor St. West (Bank of Nova Scotia Building) and will limit his practice to diseases of the ear, nose and throat.

Dr. G. Sterling Ryerson has returned from Europe. After attending the meeting of the British Medical Association in Birmingham he proceeded to London, Paris and Berlin to observe the work being done in the radium institutes in these cities.

Dr. George Strathy, of College Street, went with Sir Watson Cheyne, of London, England, to spend a few weeks in the wilds of New Ontario, leading the life of the wilderness, lulled to rest where the world is "plumb full of hush."

Dr. B. E. McKenzie has just recovered from an attack of appendicitis. We hope a pleasant holiday may help to strengthen and obliterate, to some extent, the memory of his recent suffering. He expects to resume his professional duties on September 1st.

Dr. James M. McCallum is the Robinson Crusoe of one island in the Georgian Bay, and Dr. F. N. G. Starr is building a charming bungalow on an island nearby. Dr. Alexander Primrose and Dr. Alexander McPhedran are also within neighborly distance.

Dr. and Mrs. J. N. E. Brown have just returned from an extended trip abroad. They both know how to enjoy, to the full, the hours spent in many lands, and their friends in Toronto know what the joy of listening means when they can be persuaded to put into words some of their golden memories.

Dr. W. E. Gallie, of 143 College Street, is another surgeon who has just returned to Toronto after a three months' trip abroad. He looks "fine and fit" and did himself and Canada the honor of stepping firmly on the ladder of fame that leads up to the degree wound up in the mystic letters of "F.R.C.S."

MONTREAL, FROM MOUNT ROYAL.

News of the Month

CLIFTON SPRINGS SANITARIUM

One of the striking developments of recent years in medicine has beeen the inercase in the number of hospitals and sanitariums. The advantages of institutions of this kind, in the treatment of many diseases, are apparent. The best results are only possible where the patient can be directly under the control of the physician; where correct diet, nursing, baths, massage and other adjuncts of medicinal or surgical treatment, which are so important, are at the physician's command.

Not all patients should be sent to a Sanitarium, but there are many who can be treated successfully nowhere else. A constantly enlarging circle of physicians recognize this and are availing themselves of these advantages in their practice.

Only a short time ago, to many people, the name sanitarium was synonymous with an institution for the insane or feeble-minded or a retreat for alcoholics and drug habitues: but this the public has recognized as erroneous and has come to realize that a Sanitarium stands for everything the opposite of these.

The modern sanitarium is, in reality, a luxurious home, supplied with every convenience for the welfare of the patient, and with the best of medical skill at his command. The patients' pleasures are consulted as well as his necessities, and every effort is made to make his stay both pleasant and profitable.

Clifton Springs Sanitarium was founded in 1850 by the late Dr. Henry Foster in the spirit of Christian philanthropy, and in 1881 was transferred by him to a Board of Trustees, that the philanthropic spirit of the place should be perpetuated. This is not a commercial institution, and no profits are paid to anyone, but to the limit of our ability these are applied for the benefit of certain classes, to whom special consideration is extended: Missionaries, Teachers of Public Schools and Colleges, Clergymen, Physicians and Nurses are alike thus benefited.

MONTMORENCY FALLS, NEAR QUEBEC.

Cilfton Springs is located on the Auburn branch of the New York Central, and on the main line of the Lehigh Valley Railways, 40 miles east of Rochester and 64 miles west of Syracuse.

PUBLIC HEALTH EXHIBIT AT THE CANADIAN NATIONAL EXHIBITION

THE following is the provisional programme for a course of lectures to be given in connection with the Public Health Exhibit at the Canadian National Exhibition now open:

Aug. 29—Prof. A. P. Knight, Kingston, "Medical Inspection of Schools."

Aug. 30—Dr. J. A. Amyot, Toronto, "Purification of Water Supplies."

Aug. 31—Dr. Chas. J. Hastings, Toronto, "Home Sanitation."

Sept. 1—Dr. James Roberts, Hamilton, "Prevention of Typhoid Fever."

Sept. 2—Dr. G. D. Porter, Toronto, "Prevention of Tuberculosis."

Sept. 4—Dr. W. T. Connell, Kingston, "Rural Water Supplies."

Sept. 5—Dr. C. St. Clair Drake, Chicago, "The Housing Question."

Sept. 6—Dr. C. Gordon Hewitt, Ottawa, "The Fly Question."

Sept. 7—Prof. H. H. Dean, Guelph, "How to Procure Good Milk."

Sept. 8—Dr. Helen MacMurchy, Toronto, "Infant Mortality."

Sept. 9—Dr. W. H. Doherty, Toronto, "The Necessity for Dental Inspection of School Children."

THE CANADIAN MEDICAL EXCHANGE

PHYSICIANS are often asked by recent graduates where there is a good opening to start practice, and they can pilot those in search of practices to a short-cut thereto, by putting them in touch with The Canadian Medical Exchange, conducted by Dr. Hamill, 75 Yonge Street, Toronto, as he always has from 20 to 30 practices

HARVEST IN THE NORTH-WEST.

for sale in the different Provinces, besides many openings where there is no doctor, and where the people desire one to locate and would be loyal to him.

See his list of offers among our advertising columns.

Muskoka Cottage Sanatorium.—Through the courtesy of Mr. W. J. Gage and the directors of Muskoka Cottage Sanatorium, a party of physicians and others were taken up by private car on August 10th to Gravenhurst. They were most generously treated and received by Dr. and Mrs. Kendall and the house staff and enjoyed a delightful afternoon and evening, returning to Toronto the following morning.

Handsome Gift to the Western Hospital.—Once again has Mr. H. C. Tomlin, of Toronto, generously come to the aid of the New Western Hospital on Bathurst Street, which is now rapidly approaching completion. This time Mr. Tomlin has presented to the Board of Directors a magnificent Bramhall Dean sterilizing plant, purchased through Messrs. Ingram & Bell, Ltd., of Toronto, and valued at over $1,000. This liberality on the part of Mr. Tomlin, who for years has befriended this hospital, is certainly appreciated

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BOOK REVIEW

Official Automobile Road Guide of Canada. With map of routes authorized by the Ontario Motor League. 1911. Edited by James Miln. Fifth edition.

Physicians will be interested in the 1911 edition of The Official Automobile Road Guide of Canada, recently published by James Miln of this city. This is the fifth edition of this book, showing the demand that there has been for a reliable road guide for Canadian motorists. It is authorized by the Ontario Motor League. Though physicians have not very much time to do a great deal of touring, they frequently have opportunities of getting away for a week-end, in which case such a book as The Official Road Guide is almost invaluable. The book is made up of

CAPILANO CANYON, VANCOVER, B. C.

a series of maps, showing the different roads throughout the Province, and giving full particulars as to the best roads to take in order to reach almost any desired point in Ontario. It also contains the automobile laws that are prevalent throughout the different States of the Union, as also every detail as to the Canadian Customs Laws, the Rights, Obligations and Liabilities of Tourists, Provincial Motor Regulations, List of Motor Clubs throughout Canada, and, in addition, a great deal of information useful to the motorist. After looking over carefully the fifth edition, we can confidently recommend the book to the members of the profession. It is well worth the price charged per volume.

GRAPE JUICE AS A DIET*

In the critical period of recuperation from disease and tissue waste, a rich yet easily assimilable food is essential. As a liquid food has many advantages, most diets for the sick consist largely of milk. Especially at this season of the year, the profession will find Smith's Grape Juice a splendid substitute for milk. In many cases, like milk this particular brand of Grape Juice supplies the system with the largest amount of vitality and force. Some people, of course, have a distaste for milk. For such patients Smith's Grape Juice offers a palatable substitute. Many patients suffer from an abnormal condition of the stomach, and find it difficult to retain milk, due to the fact that milk albumenoids coagulate in hard, compact curds. It will be found that when the weakened stomach rejects all other liquid foods, it almost invariably retains Grape Juice. In order to tempt the listless and to foster the capricious appetite of the convalescent is frequently half the battle in nursing. Smith's Grape Juice is not only a grateful food, appealing to both the palate and the eye, but is also one which admits of much dainty variety of preparation, at a time when the dietary is only too limited.

*Publishing Department.

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Original Contributions

THE PRACTICAL VALUE OF LIP-READING

BY MAX A. GOLDSTEIN, M.D., ST. LOUIS.

As the progress of otology develops more positive data and the functional tests for hearing approach more nearly the character of an exact science, we are placed in a better position to classify that large group of cases of pronounced deafness which have been heretofore so vaguely disposed of by the otologist.

The classic and valuable investigations of Rinné, Weber, Politzer, Bezold, Lucae, Gellé, Koenig, Schultze, Bárány, Schwabach, Gradenigo, Bing and others, have resulted in our present well-developed system of functional tests for hearing whereby we are enabled to determine not only the differentiation of affections of the sound-conducting mechanism from those of the perceiving apparatus, but also the finer distinctions between ankylosis of the ossicles, impairment of the membrana tympani, fixation of the foot-plate of the stapes, and various adhesive processes, on the one hand, and oto-sclerosis in its various manifestations and still unknown pathology on the other.

Clinically we know that the various adhesive processes and similar pathologies of the middle ear are often still amenable to treatment and that oto-sclerosis has thus far defied every therapy of the resourceful clinician.

Not only are the results obtained from carefully conducted functional hearing tests a factor of more accurate diagnosis, but we are also placed in a position to prognosticate the future of profoundly impaired hearing.

Let us assume that the patient before us presents the following hearing-test record: greatly diminished perception for both high and low tones of the tuning fork series in both ears; conversation and whisper voice heard only at short range; a 60-inch watch heard at one inch from the meatus; add to this a high-pitched tinnitus, Paracusis Willisii and occasional vertigo, and you have a clinical picture of definite oto-sclerosis. This patient asks your final advice as to his condition and depends on your dictum for the further disposition of his case. In all sincerity, you must admit your impotency to help him further by any method of otologic treatment known to you. It is unfortunate that in such a case we are compelled to confess to the patient that we can offer him no further aid, that we have reached the limit of our scientific possibilities and that his defective hearing is destined to remain a permanent handicap to his well-being.

There is one hopeful outlook, however, which seems to be developing as a scientific evolution, and which the otologic world is destined to recognize as a practical solution of this problem, and that is the form of special education known as lip-reading, or, in its broader appellation, speech-reading.

" When the ear has become unable to convey to the mind the audible impressions of speech, the eye will, in many instances, gradually accustom itself, even without special training, to interpret the motions of the mouth which produce speech and convey a more or less perfect suggestion of the words of the speaker."

Lip-reading is not a recently developed aid to the deaf, nor is it a new system of special education. There are authentic records that systematic instruction in this art has been attempted in Europe as early as the 16th century. Dr. John Bulwer, in 1648, refers to " that subtle art which may inable one with an observant eie to see what any man speaks by the moving of his lips." In America, John Braidwood instructed in lip-reading, in Virginia, in 1812. In 1841, Dr. Schwartz, of Dresden, published the first work in Germany relative to lip-reading, a small volume entitled " Lip-reading as a Substitute

for Hearing and as a Means to Compensate as far as Possible, the Deaf for the Loss of the Sense of Hearing." The evolution of lip-reading as a systematic training arranged on scientific and phonetic principles, is of more recent origin and in its present stage of development offers to the deaf and the partially deaf, opportunities for social intercourse which may largely compensate for the impairment or loss of such an important sense-organ as the ear.

There are two classes of the deaf to whom this course of special training is applicable; the first comprises all types of the congenital deaf who have never heard the sound of the human voice and the large group of cases in which total deafness has developed before the eighth year, or where the acquisition of speech and language has been forgotten.

In the development of our system of education for this class, both in institutional work and in private training, there has been an interesting evolution. The sign language, the manual alphabet, the oral method, the system of visible speech, and finally lip-reading, have developed step by step, until to-day there is a consensus of opinion among teachers of the deaf that the most practical system of education for this class is that of the oral method and articulation, together with proficiency in lip-reading.

Our present question, however, concerns itself more especially with that large class of the incurable deaf who have lost the faculty of hearing later than the 10th or 12th year of life. After this age the faculty of speech is definitely developed that even though the individual becomes totally deaf, he never completely loses this practical form of expression of thought.

There is a vast difference in the acquisition and perfection of the science of lip-reading by the congenital deaf pupil on the one hand and that of the pupil of acquired deafness on the other; the former class must be instructed not only in lip-reading, but also in tone production and articulation. If such active workers as Hartmann and Gutzmann in Germany, Love in Britain, Escat in France, Bell and Wright in America, have been able to demonstrate by practical results the splendid possibilities of the articulation and lip-reading system in the congenital deaf pupil, where there are innumerable obstacles to overcome in the long years of training, how vastly greater are

the possibilities to the incurable deaf who possess fluent speech and whom a short period of training may easily make proficient lip-readers.

We have passed the experimental period in the consideration of this valuable system of instruction, and to-day we must consider the length of time of study, the place to acquire this special training, and the exercise of patience, industry and application on the part of both pupil and teacher.

The difficulties of acquiring a practical working knowledge of lip-reading have been very much over-estimated by those unfamiliar with this field and the good intentions of many a prospective student have thus been discouraged. They have been told that the time of training is interminable and that the actual results are scarcely commensurate with the time, energy and money expended.

Practical experience has proven these hypercriticisms to be fallacies, and the results, especially in the adult deaf, have been uniformly satisfactory, and in many instances brilliant. On one occasion I conversed for several hours with a young lady visitor, and was not aware, experienced otologist and careful observer though I am, that she was profoundly deaf, had mastered speech-reading in less than two years, and was equally familiar with German, French and English.

The time to begin such a course of instruction is now. Age is no handicap to the acquirement of proficiency in lip-reading if god sight, a fair degree of intelligence and an ordinary vocabulary of spoken language are the assets of the pupil; I have known pupils of fifty to show as satisfactory progress as pupils of twenty.

As careful observers in the practice of otology, it is well known to you all that every individual with even moderate impairment of hearing unconsciously watches the lips of the speaker to assist him in the conveyance of a thought expression which reaches the ear more or less imperfectly, but which is intensified in its central interpretation by the aid of the eye. The ear has been so commonly regarded as the only sensory organ through which speech may be conveyed to the brain that few realize that the same result, difficult as it may seem, may be reached by another sensory organ—the eye. Just as the sense

of touch may be hyper-developed as an accessory sensory organ to the blind to express recorded thought, so may the eye be trained as a valuable substitute to the ear to interpret the spoken word.

Scattered throughout this broad land you will find a trained teacher here and there whose period of practical service in this field qualifies him to assist in this grand cause. It is an interesting observation, however, that no concerted action has, as yet, been attempted whereby the enormous class of the partial deaf and incurable deaf may be offered the practical advantages of systematic training in lip-reading; it seems to me that our own profession has not yet realized to its fullest extent the enormous possibilities of the systematic teaching of lip-reading.

The importance to the otologist, as well as to the incurable deaf patient of a knowledge of the art of lip-reading or speech-reading certainly requires no discussion. To the partial or incurable deaf the acquisition of lip-reading is a manifold blessing; it releases him from the constant handicap of his aural infirmity; it relieves the constant nervous strain and embarrassment of isolation from the rest of his fellows; it restores his social status and his means of communication with his fellow-men. To the otologist it offers a consolation for his inability and impotency to cope with certain forms of aural pathology and it places him in a position to restore the peace of mind and to instil new hope in his deaf patient.

Before we are in a position, however, to advise our patients to take up this practical training we must ourselves be more familiar with our subject; there are a number of practical considerations of this question to which your attention should be directed, especially if we agree that the art of lip-reading is so important a field of study and has the far-reaching possibilities claimed for it.

Grant that every otologist has in his clientele a large number of patients partially or totally deaf, the result of suppurative, catarrhal or sclerotic aural processes, and that the limit of practical treatment has been reached; this is the group of cases of every clientele whom you should advise to take up the systematic study of lip-reading. The first question put to you as advisor will be: "Where may I obtain such instruction?" Our national otologi-

cal bodies are not all centred around the metropolitan cities of the East, where some of these special schools and teachers are located; many of our Fellows live in smaller cities, North, South and West, where such schools and teachers are scarce or unknown. Our first need, therefore, is a sufficient number of experienced teachers necessary to supply the great demand of concerted action in this good work. To complete my paper I have added a list of special normal schools and private instructors where such training is offered to intelligent, active, patient, observant men and women to perfect themselves as teachers in this noble cause.

In discussing this question with a number of lip-reading experts of long experience, I have drawn the conclusion that one to two years of careful training and constant practice with a large variety of pupils, will place these pupil-teachers in a position to undertake the intelligent teaching of this useful art. Let each otologist of our organization, therefore, select from his own community several intelligent young men or women, who, in his judgment, may be qualified; urge them to go to one of the training schools for teachers of lip-reading and pledge them to return to his community to take up this work.

The patient, on receiving your advice to take up lip-reading, will ask several pertinent questions:—How long is the required course of study? How often will instruction be given? Where can such instruction be obtained? What will be the expense?

The principles of lip-reading may be mastered in comparatively few months, but the practical value of this art will perhaps be appreciated only after proficiency is attained by considerable practice; such proficiency, however, depends on the patience and application of the pupil rather than on the number of lessons after the principles have been mastered. A pupil of average intelligence and alertness may master the principles of lip-reading in from five to six months, taking two hour-lessons each week; add to this one year of daily practice for accuracy and speed, and the time of pupil-service is completed; in short, a term of from one to two years is required to develop practical independence and experience to qualify the lip-reader to readily carry on an accurate, fluent conversation.

Lip-reading is not only a pedagogical, but essentially also a

psychological problem; mind-training is as important a factor in the production of the proficient speech-reader as is the accurate mechanical training of the eye to read the lips. The training of the pupil to analyze the various movements of speech as produced by the lips is but one factor in the systematic education that develops the expert speech-reader. The language of facial expression, the external physiology of speech, the many positions of the lower jaw, the temperamental differences of speakers, the psychology of language intelligence, the sequence of expressed thought, —all are units necessary to the upbuilding of a perfect mastery of speech-reading.

There are many words which appear alike to the eye of the speech-reader, as for instance, those beginning with the labial consonants *p, b. m,* and the linguals *t, d, n,* and words whose consonants are practically invisible, as *end, hen, head,* and those whose vowels are difficult of analysis, as *hate, eight, aid,*—letters and words which could not be differentiated by the eye alone unless brought into association with the other words of a phrase or sentence and the facial physiology which accompanies the expressed thought.

The speech-reader sees more than the form of the lips, the position of the tongue and the size and shape of the aperture of the mouth; he depends much on the expression of the eye, the contraction or elevation of the brow, the movements of the head, the gestures of the hand and body and all other elements that may be used to express spoken thoughts. The pantomime of language is as vital to the speech-reader as is the formation of the lips.

In a recent experiment, Gutzmann, in his work, "Facial Speech-Reading," cites some remarkable instances of faultless speech-reading among his pupils solely from pantomime and facial expression, even when the mouth of the speaker was hidden.

If we proceed with this analysis further, it would involve us in a discussion of the various methods of training in this field, a subject which is foreign to the present paper; it is simply my desire to point out to the uninitiated the many phases of this problem and the dignified position to which such special training may rise.

What a fertile field and wonderful opportunity for good work, meriting the active and moral support of every otologist and the

energetic, patient and skillful direction of every specially qualified teacher!

Our esteemed confrere, Dr. James Kerr Love, of Glasgow, has opened another avenue in which the mastery of lip-reading may find appreciative recognition—an avenue of public education and charity. During my visit to Glasgow last season, Dr. Love pointed out to me some of the practical opportunities possible to instruction in lip-reading as an aid to public education. He has organized classes for the poor where such instruction is systematically imparted at nominal fees for the course; he has interested the Board of Education of the city of Glasgow and already the results of this good work are being manifested. The accompanying card is self-explanatory. This plan is worthy of emulation in every metropolitan city of our great commonwealth.

This is, I think, the first attempt that has been made to interest the American otologists as a body, in this special form of education, and I appeal to every Fellow, not only for his good will and moral support, but for active co-operation in an endeavor to plan a general movement which may have for its purpose the education of the public to the value of lip-reading as a system of instruction to assist those partially or totally deaf to a more independent social status among their fellow-men. We would direct the attention of the medical profession to the opportunities and resources which a knowledge of lip-reading may afford this class of the people; the specially qualified teachers to the worthy cause in which they may be enlisted; the otologists for the boon which they may confer on that large class of the deaf heretofore so seriously handicapped in carrying out their social and economic functions. All who may be interested in this work should realize that there is no effort in the wide realm of education more heroic or more charitable than the emancipation of the deaf.

NORMAL TRAINING SCHOOLS FOR TEACHING OF ARTICULATION AND LIP-READING INSTITUTIONS.

Mystic Oral School for the Deaf	Mystic, Conn.	Misses J. and E. B. Worcester.
Columbia Institution for the Deaf and Dumb—		Dr. Percival Hall.
The Kendall School for the Deaf and Gallaudet College	Washington, D.C.	Dr. Lyman Stead.
Normal Practice Public Day-School for the Deaf	Chicago, Ill.	Miss Mary T. McCowen.
Indiana State School for the Deaf	Indianapolis, Ind.	Mr. Richard O. Johnson.
Clarke School for the Deaf	Northampton, Mass.	Miss Caroline A. Yale.
Detroit Day-School for the Deaf	Detroit, Mich.	Miss Gertrude Van Adestine.
Swarthmore School for the Deaf	Swarthmore, Pa.	Mrs. J. Scott Anderson.

PRIVATE TEACHERS.

Miss Mary S. Breckenridge	Cincinnati, Ohio	Gilbert and Yale Aves.
Miss M. E. Bruhn, (Miller-Waller System)	Boston, Mass.	610 Pierce Bldg., Copley Square.
Miss Emma F. West-Davidson	Philadelphia, Pa.	207 Fuller Bldg., 10 S. 18 Street.
Mrs. Cora D. Gorton	New York City	109 West 56th Street.
Mr. David Greene	Hartford, Conn.	485 New Britain Ave.
Mrs. Sarah Jordan Monro—(Summer School for Teachers)	North Andover, Mass.	16 Elm Street.
Mrs. A. B. N. Moss	St. Louis, Mo.	820 Academy Ave.
Mr. E. B. Nitchie	New York City	156 Fifth Ave
Mr John Dutton Wright	New York City	1-2 Mount Morris Park, West.

DIFFERENTIAL DIAGNOSIS AND OPERATIVE TREATMENT OF RIGHT-SIDED SALPINGITIS AND APPENDICITIS

BY S. M. HAY, M.D., TORONTO.

Gynaecologist to Toronto Western Hospital, Consulting Surgeon Toronto Orthopedic Hospital.

MANY years ago the late Lawson Tate said, "Absolute accuracy in diagnosis is far from being possible; only the ignorant assert that it is and only the fools wait for it." In many cases this remains true to-day. Have we not all exhausted every means at our command to arrive at an accurate diagnosis and then found that we were only partially correct? Fortunately it is not always necessary to wait for this absolute accuracy, as the indications for treatment are frequently unmistakably plain. Take, for example, a case in which we have diagnosed intestinal obstruction. We do not waste time in trying to decide whether the obstruction is caused by volvulus or an adhesive band; we operate immediately. Here early operation means life and delay means death. It matters little whether an abdominal tumor be an ovarian cyst or a parovarian cyst, operation is the treatment. Again, whether a troublesome enlargement in a fallopian tube be an ectopic gestation or a chronically enlarged and diseased tube, the line of procedure is the same. But when we come to consider appendicitis and right-sided salpingitis in their acute conditions it is very important that we do not mistake the one disease for the other, as the treatment is different, which I hope to be able to show a little later on.

Appendicitis usually comes on suddenly in a patient previously in good health. Frequently the patient has had a day of over-fatigue and has eaten a full evening meal while in this tired condition. She probably awakens in the early morning hours with severe pain all over the abdomen, and she may soon have nausea or vomiting. After a few hours the pain localizes in the region of the appendix. At this time you will find the right rectus muscle rigid and the left one soft. Deep pressure on the left side frequently causes pain on the right side. This is due to increasing the intra-abdominal pressure in the region of the inflamed appendix. At times we will find tenderness, and some rigidity, over both sides of the abdomen, but it will be greater

over the appendix. I have found in such cases, on opening the abdomen, that the appendix had commenced to leak, or become gangrenous, and a general peritonitis was being set up. We may have rise of temperature at this time, and some increased frequency in the pulse rate, but it is well not to put too much dependence in either temperature or pulse.

Dr. J. B. Murphy says: "The symptoms of acute appendicitis are, in my experience, in the order of their occurrence: 1. Pain in the abdomen, sudden and severe. 2. Followed by nausea or vomiting. 3. General abdominal sensitiveness. 4. Elevation of temperature, beginning from two to twenty-four hours after the onset of the pain. These symptoms occur almost without exception in the above order, and when that order varies I always question my diagnosis."

Appendicitis is said by some authorities to occur much more frequently in males than in females. This must certainly be wrong. Doubtless many cases of appendicitis in females are diagnosed as ovarian and tubal troubles. Other things being equal, appendicitis should be more frequent in the female, where the appendix is closely connected by location, blood supply, lymphatic supply, and the appendiculo-ovarian ligament of Clado, to organs so frequently the seat of primary disease as are the tubes and ovaries. Many times we find the appendix and the ovary and tube of the right side mixed up in the same mass of adhesions. In this case it is difficult at times to decide which was primarily at fault—the tube or the appendix. Doubtless disease in either one of these organs places the other in danger. If after operation a careful investigation discovers colon bacillus in the diseased tube and ovary we may be justified in concluding that the disease began in the appendix. On the other hand, should we find gonococcus in the inflamed appendix the inference is that the primary cause of the trouble was in the right tube and ovary.

Salpingitis is the result of an ascending infection. It may follow labor or abortion, or it may be due to gonorrheal infection. The most acute forms of salpingitis are nearly always the result of a septic infection of the endometrium following labor or abortion. Chronic or subacute salpingitis is either due to gonorrheal infection from the beginning, or to septic cases that have survived the acute stages.

There are two routes by which the infection may reach the internal organs of generation. First, by continuity of tissue—that is, along the mucous membrane of the vulva, vagina, uterus and on into the fallopian tubes. Second, by way of the blood-vessels and lymphatics. The first route is that usually taken by the gonorrheal germ, while the second is the more common in women after labor or abortion, and very often results in pelvic cellulitis. The gonorrheal germ frequently remains quiescent in the tube long after it has disappeared from the lower genital tract, and fires up again on the slightest provocation. This lighting up may be repeated time after time. These cases are sometimes mistaken for appendicitis.

In salpingitis there is probably a history of infection following labor, abortion or a menstrual period; or the infection may come at any time. If it be of gonorrheal origin we expect to find an irritating discharge from the vagina, a hot, swollen and tender vulva and vagina; there may be pain on micturition, indicating involvement of the urethra. The microscope frequently decides for us the kind of infection present.

The following points may be of value when differential diagnosis is difficult:

Salpingitis.	Appendicitis.
1. Patient poorly for some days previously.	1. Sudden onset in a patient previously in good health.
2. Probably a history of infection.	2. No history of infection.
3. Fatigue only aggravates symptoms already present.	3. Frequently follows a hearty meal taken while fatigued.
4. Pain low in the abdomen or in the pelvis from the first.	4. Pain at first general over the abdomen.
5. Pain lower than McBurney's point.	5. Pain localizes in a few hours in McBurney's point.
6. Nausea and vomiting not frequent.	6. Nausea and vomiting frequent.
7. Not necessarily so.	7. Right rectus muscle rigid.
8. Greatest tenderness in vaginal vault by bi-manual examination.	8. Greatest tenderness near McBurney's point.
9. Intestinal disturbance uncommon.	9. Intestinal disturbance—constipation, diarrhœa or obstruction—frequently present.
10. Less virulent and slower in progress.	10. More virulent and rapidly progressive.

There are cases occasionally met with where these symptoms are so mixed up that we are much perplexed and feel unwilling to commit ourselves to a definite diagnosis. In such cases we are

perhaps justified in concluding that we have the two conditions actively present in our patient.

In conclusion I will just mention a few of the general guiding principles in the surgical treatment of these two important conditions, the details I will omit entirely.

Perhaps I cannot convey my idea of treatment more briefly and better than by quoting from a paper which I wrote some time ago on: "Operative Technique in Abdominal and Pelvic Surgery," and which was published in the *Canada Lancet* of January, 1909:

"There are certain acute conditions in which we should never operate while they are acute. Again, there is one familiar acute condition where immediate operation is advisable. Why not operate in acute salpingitis? Why operate in acute appendicitis? These are questions I have occasionally put to final students in the Council examinations. They are generally unable to give a reason. The way I have reasoned it out for myself is that in salpingitis we are dealing with an organ that normally opens directly into the peritoneal cavity, and before the disease has had time to close the fimbriated end of the tube the pelvic peritoneum has become to some degree infected. Surgical interference at this time is likely to spread the infection by breaking down the protection that nature has commenced to build around the poisoned point. Also experience has taught us that these cases, while acute, frequently succumb, if radical surgical measures are employed. And we also know that the tendency of such cases is to either subside or to go on to pus formation, which becomes well walled off and may later on be opened through the vagina, and, if cure does not follow, an abdominal operation may be done still later when the pus, if any remain, has become less virulent. On the other hand, in acute appendicitis if we operate early, while the poison is still confined to the appendix, we are operating on a closed tube, and by removing it we have gotten rid of the focus of infection and the entire trouble. And again, experience has taught us here that appendicitis is one of the most treacherous of diseases. The appendix is likely to perforate or become gangrenous and destroy the patient's life with remarkable rapidity. In any given case, with our present knowledge, we are quite unable to predict with any degree of certainty the course the disease will take."

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THE USE OF COLD BATHS IN DISEASES OF CHILDREN

BY JAMES NEWELL, PH.B., MD., CH.M., WATFORD, ONTARIO.

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I HAVE chosen the subject of cold baths in the treatment of children's diseases. When I received an invitation to read a paper before this Association I cast about, thinking what would suit me as well as those who were to listen to me. I had intended to confine my remarks to the cold bath treatment of convulsions in children attended by high temperatures, but when I received the printed programme I saw that it stated that I would furnish a paper on the use of cold baths in diseases of children instead of the treatment of convulsions attended by high temperatures. As the subject is comprehensive and the time limited, I shall make a few cursory remarks in general, outlining the salient points in the treatment of a few children's diseases by the use of cold water. I may say it has for over 30 years been a favorite method of treatment in children's diseases attended by high temperature and irritability of the nervous system, and that baths in general, cold, tepid and warm, are not more generally used by our profession is a pity. I feel very certain that very many of the diseases of children can be just as successfully treated by baths and with less subsequent danger as through the agency of drugs or other potent remedies. When we come across a child lying in convulsions with a temperature of 104 or 105, rigid, stertorous, and insensible to external impressions, we are very apt to think of inhalations of chloroform, hypodermics of morphia, chloral by the rectum, etc., but in such cases I have seen the happiest results follow the immersion of the child into a bath of 75 or 80 degrees, followed by affusion of cold water over the head, and supplemented by friction of the limbs and body till the rectal temperature dropped to 100, when the child is removed from the bath and wrapped up with hot water bags or bottles applied to the extremities if they should have become blue and cold. In many of the sharp, acute febrile attacks of children it is often difficult or impossible to say positively why there should be such

a rapid and high rise of temperature, often attended by nervous twitchings or actual convulsions. Now it is just in such cases that I have experienced the happiest results from the bath treatment. I am fully aware that to stay and superintend the bath treatment takes up time, and that it is much easier and less loss of time, to deal out a few acetanilide or phenacetine powders and tell the mother to give one every hour or two till the fever has dropped down or left, but I have always been suspicious of the after effects of these drugs in the high temperatures of sepsis, inflammations or diseases due to pronounced organic disturbances.

Cold baths or packs are among our most efficient means of reducing temperature.

The coal tar preparations, antipyrine, phenacetine and acetanilide, are all reducers of febrile temperatures, and may sometimes be employed, but this action is apt to be followed by depression of the nervous system and heart, besides which is their injurious action on the blood, of destroying the red cells and converting hemoglobin into methaemoglobin.

The use, therefore, of baths to bring down dangerous high temperatures in certain diseases of children complicated by convulsions has been followed by me for 30 or more years, and with what I think very successful results. The application of cold water lowers temperature without the bad effects of the coal tar preparations, although I must say I occasionally meet with parents who would allow you to fill their children with powerful drugs with impunity, but who are quite often apprehensive as to the baleful or injurious effects which a bath may have on a sick child.

The stimulating action on the skin, the consequent reflex action on the heart and respiratory centre, causing an increase in the general blood pressure as well as a greater depth in the respiration, is productive of very beneficial results, by increasing the oxidation process, increasing diuresis and other metabolic changes, such as rise in the number of red cells, and an increase in the quantity of hemoglobin. Time will not permit me to go into the various *modus operandi* of the remedial actions of baths in the treatment of children's diseases, but if I am permitted to draw conclusions from an experience of thirty or more

years, they have proved themselves very efficient and safe therapeutic agents in my hands, and I have many times thought that sufficient space is not given to hydro therapy in our standard works on children's diseases.

Hippocrates has wisely said in his aphorisms, "That experience is fallacious and judgment is difficult," but, as a recent writer in one of our college papers puts it, I shall end by quoting his concluding sentence:

"I am aware, of course, that experience does not carry much weight nowadays, and also that experience is not an infallible teacher. But sometimes it is well for experience and observation to sit in judgment on the actions of the pushing mass of humanity, pushing towards goals of novelty; in order to reduce this spirit to a just degree of conservatism, lest the flights of impulse reach a degree of irrationalism which may re-act to dim the fair name of science."

Selected Articles

NOTES ON ITALIAN SURGERY

BY WILLIAM J. MAYO, M.D., ROCHESTER, MINNESOTA.

The science and art of surgery has no country, and while the practice of the art varies in some particulars with different nations, it may be truthfully said that the best surgery is much alike in all civilized countries. Italian surgery is no exception to this statement. The great surgeons of Italy conduct their clinics much as the clinics are conducted in France, Germany, Great Britain and America.

In making a direct comparison between the work done in America and that which is done in foreign countries, we cannot flatter ourselves that we are leaders all along the line. Surgeons in other countries are making equal effort and equal progress. Naturally, every country has its peculiarities, and in this little narrative it is my purpose to give my version of the conditions which have contributed to the development of the Italian school of surgery.

One is very apt to think of a holiday in the light of a summer vacation, yet those of us who live in the North and take our vacation in the summer time, to travel abroad with a crowd of tourists and suffer from heat, dust, and usually from poor accommodations because of over-crowding, often have experiences little resembling a vacation. Moreover, the university clinics are not in operation during the summer semester, and one might get a very poor impression of medical conditions in foreign clinics from a visit paid at that time; but during the spring months the clinics are in full operation, and the leading surgeons are at work.

From the first of June to the first of March, at least nine months, the weather conditions in Minnesota bear a favorable

comparison with any part of tthe world it has been my privilege to visit. A popular and fallacious idea, at least as far as Minnesota is concerned, is that the summer months, especially July and August, are not favorable months in which to perform operations. We have found the contrary to be true. No other months in the year furnish a lower mortality or a smaller morbidity, and, as a rule, patients do not suffer particularly from the heat. We are, however, obliged to admit that in March, April, and the first half of May the weather is apt to be trying, particularly after one has finished a hard winter's work. The latter part of April and the month of May are usually pleasant months in Germany, Austria, France, and in the lower elevations of Switzerland, while Italy offers ideal conditions in March and April. Here one needs warm clothing in the house, but out of doors the sun is bright and warm, and the air soft and fragrant with luxuriant growth of flower and tree. The orange trees are filled with fruit.

For travelers who dread the ocean voyage it will be a comfort to know that large vessels of moderate speed are now in the New York and Mediterranean service. Generally speaking, the larger the vessel the less the sea motion, and a steamer sailing four hundred miles a day has very little vibration compared with one sailing five hundred or more miles a day.

The first stop en route is usually made at Genoa. By landing there one can reach the principal cities in Italy by short stages, and then sail for home from Naples direct, thereby saving several days time.

Italy suffered from continental wars for twelve hundred years and was divided into petty states fighting with each other. It has now been a united Italy since the year eighteen hundred and seventy. Everywhere one sees statues of Victor Emanuel Second, representing the crown; of Garibaldi, representing the arm; and of Cavour, representing the brains which united Italy: just as William First was the crown, Moltke the arm, and Bismarck the brains which unified Germany.

Remarkable progress will be seen if one has not visited Italy for a decade. The beggars have nearly all disappeared, the people generally appear contented and industrious, and their saving, frugal habits resemble conditions among the French

peasantry. It is no longer just to speak of the home of these thirty-two millions of progressive people as "poor old Italy."

The people of northern Italy make ideal patients. They are cheerful, patient, and obedient, exhibiting many German traits, which might be expected from their previous political associations. The people of southern Italy and Sicily differ widely from those of the north, and it is from that portion of the state that America draws such a large percentage of laborers, and, unfortunately, many great rascals. The inhabitants of northern Italy are in every way a superior people. They are scientific gardeners and intensive farmers, and they would make a very desirable class of permanent emigrants.

In no way does this modern spirit of progress show more prominently than in educational matters. There are four grades of schools, beginning with the elementary and ending with the university course, all controlled by the state. The elementary course is free and compulsory and lasts five years. A pupil usually enters at five years of age, and at ten years of age the industrial life of the individual begins, four years earlier than it begins in this country. Everywhere one sees polite, industrious youngsters at work, which adds greatly to the industrial success of the country. This term of education about equals the sixth grade here, but it teaches necessary things much better and is devoid of "frills." From the elementary period on, education is elective and subject to a small fee. The next step is to the gymnasium. This course lasts five years and costs about six dollars a year. Following the gymnasium course comes the lyceum or preuniversity course of three years, which costs six dollars a year. This department cannot be entered by the student until he is fourteen years of age, although the gymnasium course can be completed in four years by an exceptionally bright student. The average age at graduation is twenty-five years, the student having had nineteen years of preparation.

For those who are ambitious for position, long, slow work in the clinic and in minor positions is the road to preferment. A university graduate must give at least one year to the army, and men in all other pursuits must give at least two years. At first thought it would appear that two years from the life of every male during the strongest and most productive period would be

a great economic loss, but their time is made valuable, as they are occupied in policing the country, and life and property are no longer subjected to danger and loss because of the bandits with whom Italy was infested until recent years. Of even greater importance in this training is the teaching of discipline and respect for constitutional authority, which are so necessary to the political life of a people who have recently passed from feudalism to constitutional freedom.

There are nineteen universities, and it is generally thought that this number is too large for a small country of short distances. This number may be accounted for in the history of Italy, with its many provinces acting independently and too frequently engaged in internecine warfare against neighboring cities. For example, the province of Tuscany has three universities—in Florence, Siena and Pisa—not over fifty miles apart, but we must remember that Pisa and Siena were at one time large and important cities quite independent of each other. Poor old Pisa! A few hundred years ago the most important maritime city of Italy, now has but fifty thousand people. It lies four miles from the sea, the river Arno having built up a great flat of land between. It still has its old university, and a good medical department is associated with its hospital.

There are but three universities in Italy which are complete. These are at Turin, Rome and Naples. The one at Naples is the largest and has over three thousand students; and that at Rome has about two thousand students. All of the professions and all of the branches, including dentistry and veterinary medicine, are taught in these three universities. The other sixteen universities in other parts of the country are more or less incomplete, that is, they are lacking in some of the professional branches, but nearly all of them have a medical department. Therefore, we find the same over-crowding of the medical profession which we have elsewhere abroad and in America.

In comparing the Italian and the American plan of education, Italy is not the loser. In the United States, from the time the child enters the first grade, he is harnessed up to a system which ends in the university, and always with the direct intention of fitting him to be President of the United States. The mere fact that only a small percentage of these students ever reach the

university or have an opportunity to become the President counts for nothing. Everything in America must be "machine-made," without any possibility of developing individuality. In our country schools nothing is taught concerning farm life, the growth of grain, or anything in the way of agricultural pursuits; neither in the manufacturing districts is there any educational variation with the view to the future employment of the individual. In Italy the first five years in the elementary school teach the things which are necessary for all classes of citizens to know. The Italian elementary course is not top-heavy in mathematics, as it is with us, as, for example, giving to the youngsters in the fourth, fifth and sixth grades difficult and silly problems and combinations which never occur in commercial life. Not even in the Italian gymnasium course, which lasts five years, is the university the object in view, but rather a good business training. It is not until the student enters the three-year lyceum course that he is actually headed for the university.

ITALIAN HOSPITALS.

It is a little difficult to understand the Italian hospital system. If one goes abroad to criticize there are plenty of opportunities, but why go abroad for that purpose? There are plenty of opportunities at home. The Italian hospitals are mostly old and little resemble our new modern buildings, but they are clean, and well lighted and aired; the care of the patients is the best; the food is good and suitable for the people. Finally, the results are excellent and will bear favorable comparison with the average results in this country. The hospitals are controlled by the state, and the expense is borne by the municipality and the state. Nuns are in charge of the nursing in the wards, and they are assisted by untrained female helpers. In the male wards the nursing is done by male orderlies. The hospital wards are very large, usually containing from twenty-five to fifty beds. At the end of each ward there are usually four private rooms, containing one or two beds each, for very sick patients.

The ceilings are high, the floors stone or tiled, and the windows are five or six feet from the floor. The large hospitals are usually connected with medical schools, and these medical schools are among the oldest in the world. The one at Bologna is the

oldest, and it was there that anatomy was first taught by Taddeo, Mondina, and Vesalius. At Bologna to-day is the greatest orthopedic clinic in Italy, if not in Europe. In the old University of Padua, Professor Bassini is to be found, whose contributions to the science and art of surgery are so well known. Padua is about fifty miles from Bologna and an equal distance from Venice. Pavia, half an hour's ride from Milan, contains one of the oldest universities, the surgical clinics of which have been made known through the work of the late Professor Bottina and his contributions to literature on the subject of surgery of the prostate. His successor in the University, Professor Golgi, is known to fame through his studies of the nervous system.

GENOA.

Genoa has two large hospitals, one old one and a very beautiful new one named for its founder, "The Duchess Galliers." The hospital is endowed very liberally, and it is charmingly situated on a high hill on the shore of the Mediterranean and facing the city. The front of the building is the shape of a segment of a circle, composed largely of marble, and it has two long galleries or corridors. There are five pavilions for the sick, two and a half storeys high, with basements, projecting out from the corridors toward the sea. The kitchens are located in the basement, and the upper storey contains rooms for the help. The wards on the first floor are for the medical service, and those on the second floor for the surgical service. The operating room for septic cases is, however, on the first floor. The main operating-room and a smaller "laparotomy-room" are on the second floor. There are twenty-two beds in each ward, with the usual small rooms at one end for patients requiring special attention, and the service, diet-kitchen, etc., are at the other end. Connected with the hospital is a small well-equipped laboratory building, containing post-mortem rooms, museum, etc., in the hands of paid men. The X-ray laboratory is also in the hands of a competent salaried man.

MILAN.

Milan is but a few hours' journey from Genoa and is the second largest city in Italy, having somewhat over six hundred thousand inhabitants. Milan is not a university town proper, as

the university is situated at Pavia, about a half-hour ride by train. The hospital is not only one of the oldest, but it is the largest in Italy, having a capacity of three thousand beds. The main buildings are still in use after over five hundred years of continual service, and old as the buildings are they are still very useful for the purpose. A year ago while traveling in Mexico I was very much interested and impressed with the old hospital at Guadalharja, which was built one hundred and thirteen years ago by a Spanish bishop. I thought at the time that it would be difficult to plan a hospital for a tropical country which would be superior to it. When I saw the plan of these old buildings at Milan, which were originally built for a monastery, I immediately recalled the similarity in design between the two. The hospital is built in the form of a series of crosses connected at the ends, leaving a little enclosed courtyard in the centre filled with flowering shrubs and trees. In each arm of the cross is a ward containing seventy beds, or two hundred and eighty beds in each cross. The altar, acting as a partial screen between the four wards, is in a glass compartment in the centre, and the two hundred and eighty patients are thereby enabled to participate in the religious services. The ceilings in the wards are about thirty feet from the floor. Windows are numerous and begin six or seven feet from the floor, thus giving free circulation of air. Medical patients occupy the old building; surgical, gynecological, and obstetrical patients occupy seven pavilions, which have been built recently. In each of these pavilions there are four wards with a capacity of thirty beds each.

I was fortunate in having met Dr. Andrea Majocchi while he was in the States, about a year ago, looking up data for the hospital authorities to aid them in the completion of a plan for modernizing their old buildings. Dr. Majocchi visited France, Germany, Switzerland, Austria, Great Britain and the United States. He remarked very enthusiastically to me: "As splendid as were the institutions of all the countries, I admired the American hospitals and clinics most." Through his kindness I was enabled to make the best use of my time in the way of medical sight-seeing in Milan.

The accident service in Milan is very large. Professor Rossi showed me a large number of cases of fracture of the femur with results which I have never seen equalled by non-operative meas-

ures, that is, taking one case after another. Patients coming to the hospital with fractures of the femur have a light Buck's extension applied with an ice-bag at the seat of the injury for twenty-four or forty-eight hours. At the end of that time the patient is put on a fracture-table, similar to the one I saw Schede using in Bonn, ten years ago. Professor Rossi told me that he had used this table for a model, although he had simplified it greatly. The injured limb is moderately abducted and screw-traction put upon it. While held in this position the foot, ankle, leg and thigh are amply protected by cotton, and casts are applied, leaving the knee and part of the ankle free. Into this cast two lateral splints are incorporated, jointed at the knee, which continues the extension, but permits motion. A spica plaster-of-Paris bandage encloses the pelvis and is joined to the cast. After three days a radiograph is taken, and if the fracture is not in good apposition, which happens in about fifty per cent. of the cases, the patient is put back in the fracture-frame, but, instead of securing the counter-extension by traction, the limb is slipped through an iron ring, which acts as a collar around the upper end of the cast. The cast is then cut through in a circular manner at the seat of the fracture, which lies just above the ends of the iron splints. Traction is again applied, separating the cut cast until the ends of the fracture are in apposition. The gap is filled with fresh cotton wadding and plaster-of-Paris, and the ends of the Buck's extension-straps, which have been used for the pressure-traction, are caught into hooks on a little roller in the bottom of the splint. With a high shoe and a pair of crutches patients are permitted to ambulate at once, and in the wards a dozen or more of them were moving about. I saw several cases which were being treated in this manner, and examined the radiographs of their injuries. I realize that my imperfect description of the method will not enable anyone to carry out the treatment, but I hope it may call attention to this very excellent method of treating fractures of the femur.

In Professor Crosti's pavilion I witnessed a cranial operation for a tumor which proved to be a glioma. I was interested to note that the surgeon wore cotton gloves over his rubber gloves while operating.

The gynecological and obstetrical pavilion, made famous by the late Professor Porro, whose statue adorns the front of the

building, is now under the directorship of Professor Mangagalli, who does a large amount of abdominal work. He wears rubber gloves, etc., as we do in this country.

VENICE.

The hospital in Venice, like the one in Milan, dates back to the fourteenth century and was originally built for a monastery. It has high ceilings and large wards. One ward, which was built for an audience-chamber, contains a hundred and fifty beds. The wards appeared scrupulously clean. On the walls are beautiful paintings by the old masters, and the ancient wood work is the most decorative I have ever seen. Professor Giordano is the surgical director in this hospital. He is a rapid operator and uses a mask, but no rubber gloves. His assistants wear them, however, but without sleeves. Professor Giordano showed me a number of interesting cases in his wards. He has had several cases of one-sided nephritis treated by decapsulation, with good results. This hospital, with its fine clinical material, is well worth visiting. The building is a quaint old place surrounded on three sides by the sea, with a tide of from two to four feet. The air is constantly fresh, and, as practically all manufacturing establishments in Venice use hand labor, there is no dust or smoke to soil the buildings.

FLORENCE.

The general hospital at Florence (Ospedale di St. Maria Morra) is very old, of the thirteenth century. The only modern parts connected with it are the operating rooms, which were given by a wealthy American woman who married into the Italian nobility. Professor Burci is the surgical director of this hospital. He was very kind, and I enjoyed the privilege of visiting his wards to see patients after operation. He showed me many interesting cases, especially of tuberculosis and syphilis of the bone.

I spent a good share of one morning with Professor Celso Pellizzari, who is the leading specialist in skin diseases in Italy. He has an enormous amount of material, his apparatus is of the best, and with the aid of a number of assistants he uses the Finsen light, the X-ray and radium for lupus, epithelioma, etc. He said that the Finsen light is the most useful of all in lupus, but it has

no effect on epithelioma. In superficial epithelioma the X-ray is effectual, and radium is the most powerful. He has a large apparatus for the treatment of cancer by *fulguration*, but has not found it of any special value over the older methods.

ROME.

The Polyclinic in Rome is a modern hospital built on the pavilion plan, two storeys in height. It occupies a fine position in spacious grounds filled with shrubbery and trees. The hospital has a capacity of twelve hundred beds. The front buildings are used for administration purposes and for university clinics, including the laboratory for special research. Professor Durante, who holds the chair of surgery in the University of Rome, and who is director of the surgical clinic, has eighty beds at his disposal in the hospital. Professor Durante is a man somewhat over sixty years of age and is especially interested in teaching and in experimental research. Many interesting investigations are made in his laboratories.

In addition to these eighty beds for surgical cases there are three surgical pavilions of seventy-four beds each. Professor Bastianelli, who is well known in America, is director of the first pavilion. The second pavilion is under the care of Professor Alessandri, and the third pavilion is under Professor Ferreti. In all, nearly four hundred surgical beds, for which ample material is furnished. One or more clinics are held here every morning, giving a splendid opportunity to visiting surgeons. Somewhat over seven hundred operations are performed every year in each of the three pavilions. In the University clinic six hundred operations are performed, and in the gynecological clinic five hundred, making a total of about thirty-three hundred operations a year.

Professor Bastianelli has recently introduced, in his pavilion, the first school for training nurses in Italy. English trained nurses are at the head of the school. The operating rooms in this pavilion are well lighted, and the work is conducted in the most modern way. The surgeons wear caps, rubber gloves, and sleeves, and the general aseptic and antiseptic arrangements are splendid and carefully carried out. I had the pleasure of seeing a number of operations performed by Professor Bastianelli and Professor Alessandri at the Polyclinic, and I wish to express my admira-

tion for the high character of their work. My acquaintance with Professor Bastianelli's clinic was much more extensive than with that of the other clinics, and I was greatly interested in what I saw there. Both Bastianelli and Alessandri used spinal anesthesia in preference to any other. In operating about the upper part of the body and head, the patient is put to sleep with chloroform and the anesthetic continued with ether, using a Sudeck inhaler.

As regards spinal anesthesia: Professor Bastianelli has used it in his clinic in more than seventeen hundred cases without a death. He prefers novacocaine, and never employs the high injection, to which he is, in fact, very much opposed. The injection is usually made quite low down between the third and fourth lumbar vertebræ. For abdominal operations, ten c.c. novacocaine, in a Merck's tablet, is dissolved in one c.c. of sterile water and sterilized over an alcohol lamp. This solution is drawn up into a syringe, which is provided with a strong needle, in order that it may not break and leave a piece in the body. The needle is detached. The patient is placed in a sitting posture bending forward, and the usual lumbar puncture is made with the needle not higher than the second or third lumbar vertebra. An assistant places his finger parallel with the crest of the ilium as a rapid means of indicating the fourth lumbar spine. When the spinal fluid begins to drip—sometimes it is necessary to use syringe-suction to start the flow—the syringe containing the novacocaine solution is attached to the needle, and two drams of the spinal fluid are drawn into the syringe and allowed to mix with the solution. The contents of the syringe are now forced into the spinal canal, and again the syringe is filled with the mixed fluid in the canal. This is also forced into the canal, and the needle withdrawn. In all the operations I saw the analgesia was complete. For example, a large ovarian cyst was removed; a nephrolithotomy in a fleshy male, which necessitated the removal of the twelfth rib; a suprapubic prostatectomy; and many other operations. The lower the site of the operation the more effectual the analgesia, seven cubic c.c. being ample for any operation on the lower limbs. If the patients exhibit any symptoms of collapse they are given camphorated oil subcutaneously.

Professor Bastianelli was experimenting with chloroform

solution given in the veins as an anesthetic. He prefers chloroform to ether in this method as being less liable to cause embolus. In administering this anesthetic the saphenous vein is exposed in the middle of the thigh, and a cannula is introduced and tied into it. The cannula is connected by rubber tube to an air-pressure bottle containing two litres of fluid—chloroform .06 c.c. in a hundred grams of salt solution. This solution is slowly forced into the veins by hand-bulb air-pressure on the contents of the bottle. Professor Bastianelli says that not more than two litres of the solution should be used, as it over-fills the circulation and causes hemorrhage. He says that heart disease and arteriosclerosis are contra-indications to its use, and he does not, moreover, advise its use, as the method is at present purely experimental. I witnessed an operation on a male patient with extensive cancer of the mouth and tongue, who was anesthetized in this manner. The case was in a way a desperate one, and the operation was successfully accomplished.

Another very interesting case which I saw in this clinic was the removal of the tongue under local anesthesia. A little novacocaine was injected into the tip of the tongue, which was then grasped with Volsella forceps. Novacocaine was injected laterally close to the jaw, and in a few moments the whole tongue was removed painlessly with a pair of curved scissors.

His method of preparation of patients for operation is rapid and apparently effectual. The patient is washed and shaved without soap some hours before operation. When brought to the operating table the field of operation is scrubbed with benzine containing one to one thousand iodine. When the skin has dried it is covered with tincture of iodine, and the patient is ready for operation. Water must not be used, as it causes swelling of the epithelium and prevents penetration of the iodine. The deeper layers of the skin will be penetrated in three minutes. We have used this method of preparation in our clinic for several months and can heartily recommend it. Tincture of iodine undergoes chemical changes which render it irritating to the skin, and should not be used when it is more than a week old. We have found three and one-half per cent. tincture efficient. This is one-half the official U. S. P. tincture.

If the rubber gloves worn by Bastianelli or his assistants be-

come soiled during operation, they are washed rapidly in a basin containing alcohol, two parts, and tincture of iodine, one part. This solution is washed off with sterile water, and the gloves are not changed.

Professor Bastianelli uses silk for sutures and ligatures. The silk is boiled ten minutes in five per cent. carbolic acid solution the night before it is used and again in the morning just before it is used. It is taken directly from the solution.

There were two series of experiments being conducted in the Polyclinic which appeared to me to be of great value. The first was in connection with osteomalacia, a very common disease in Italy, and by no means confined to the parturient state. It is occasionally seen in men. These patients are often bedridden for months or years, acquiring great deformities, which are rendered permanent by the eventual hardening of the bones. Many years ago it was accidentally discovered that removal of the ovaries would sometimes cure the disease. It has now been shown quite definitely that it was not the removal of the ovaries, but the effects of the chloroform anesthesia, which brought about the remarkable cure. These patients are anesthetized once for one-half or three-quarters of an hour, which usually results in a cure. I saw a great many of these cases in the hospital. Professor Arcangeli has been able to cultivate a specific diplococcus from pieces of bone and periosteum, which were removed by a slight operation for the purpose of examination. The material is usually removed from the tibia. Professor Arbom found the same diplococcus in rickets, and Professor Bignami found the same diplococcus in Paget's disease of the bones and joints. They have been able to cultivate and culture this diplococcus and, by injecting it into rats, to produce the characteristic bone-disease. If injected into young rats, up to five days old, it produces typical rickets. If introduced into adult rats it causes osteomalacia. As a result of these experiments a curative serum has been produced which appears to be efficacious.

The second experiment, and the thing that impressed me more than any other one thing in Italy, was the extraordinary cancer research being conducted by Professor Fischera. It really does appear as though we are in sight of positive knowledge in regard to the disease. Personally, I have never been impressed with the

germ theory of the etiology of cancer. It seems to me that up to the present time a modification of Cohnheim's original hypothesis gives the best working theory of tumor-formation. The only thing which we have known positively about carcinoma is the influence of chronic irritation in its production. Chronic irritation causes, normally, an increased production and activity of the epithelial elements, obeying the natural law of compensation; but when this process fails to stop—when compensation is complete and continues to develop and to invade other tissues—we have cancer. An injury causes activity of the connective-tissue cells for the purpose of repair. When this activity fails to stop at the point necessary for repair, and continues riotous production and invasion of the surrounding parts, we have sarcoma. The causation of the condition, then, may lie either in the stimulation which causes it to advance or in a lack of normal ability to check. That it is the cell itself which is diseased is shown by the fact that all secondaries, no matter where situated, reproduce the primary cell and not merely a cancer of the organ in which it is found; that is, in cancer of the lip with a secondary of the liver, the secondary will be epithelioma.

It follows, then, that the vital point in cancer, both carcinoma and sarcoma, is the rapid uncalled-for production of embryonic cells. It has been shown that an extract made from a normal organ when injected into a healthy animal, tends to cause the destruction of the same organ. Bolton made an extract from the scrapings of a normal animal's stomach, and this extract when injected into a healthy rabbit caused ulcer of the stomach. Maury showed that an extract of bile-pigments would cause fatty degeneration of the liver. Finally, in the contagious tumors of rats it was found that an extract made from an embryonic rat would cause the tumor to disappear.

The explanation of Fischera's experiments lies in these known facts: As cancer is due to the unlimited production of embryonic cells, an extract from embryonic cells furnishes the necessary check to the production, and the tumor is then removed through normal processes.

Professor Fischera took two-to-six months' human embryos, which were easily obtained in the obstetrical pavilion, crushed them up, and put them in a salt solution until they were dis-

solved by autolysis. This solution was then injected into patients suffering from cancer. Five patients have been cured through this procedure. I saw three of them.

Case 1.—Carcinoma of the tonsil, cheek and wall of the pharynx, with extensive glandular involvement. The case was examined by Professor Alessandra and a piece of the growth removed for microscopic examination. The condition was considered inoperable, and the patient was turned over to Professor Fischera. After a number of injections a complete cure was the result. I examined the patient and saw the scars in his throat. I also examined photographs and microscopic slides of the tumor.

Case 2.—Patient with cancer of the rectum, operated upon by Professor Alessandra. Return of the disease *in loco*. Microscopic examination was made, and the condition was pronounced hopeless. The patient was completely cured by injections.

Case 3.—A woman with a huge carcinoma of the breast; enormously enlarged axillary and subclavian glands; arm swollen; condition inoperable. After a number of injections the glands completely disappeared, the arm became normal in size, and the tumor was reduced to one-fourth of its former dimensions.

It is worthy of notice in these cases that there was extensive glandular involvement, and that this involvement was the first to disappear.

It should be remembered that all of Professor Fischera's cases were examined by competent clinicians—Durante, Bastianelli, and Alessandra; and that pieces of the tumors were removed for microscopic examination.

Professor Fischera is extremely modest and claims but little for his work. He has given his method and his results freely to the profession. While I am not at all convinced that a cure for cancer has been found, I am of the opinion that Professor Fischera's work is philosophic in its reasoning and a distinct step in advance.—*Journal of the Minnesota State Medical Association.*

ANTERIOR POLIOMYELITIS

THE following circular has been issued by the American Orthopedic Association and the American Pediatric Society in reference to acute epidemic polyomelitis, and addressed to health authorities and boards of health:

Anterior poliomyelitis is, so far as known, a communicable disease, being communicated from one patient to another, and also by means of a third person. It occurs in epidemics, and tends to spread along the lines of greatest travel. There is reason to believe that it is prevented from spreading by quarantine, and with the very great prevalence of the disease in the summer of 1910, it is the opinion of this committee that it is essential that it should be made a reportable disease in all States, in order that its presence may be detected and its spread guarded against.

Of particular significance are the so-called abortive cases, where indefinite ailments occur in children in communities where frank paralysis also exists. These abortive cases of infantile paralysis are undoubtedly a source of infection, and their record and study is of much importance. In a community where cases of infantile paralysis occur cases of illness with sudden onset of fever and meningeal symptoms should be closely watched and regarded as possibly infectious. In such cases even recovery without paralysis does not establish the fact that the case was not abortive infantile paralysis.

All cases of infantile paralysis should be strictly quarantined, sputum, urine and feces being disinfected, and the same rigid precautions being adopted as in scarlet fever. This quarantine should, in the opinion of the committee, last for four weeks, in the absence of definite knowledge as to when the infection ends. Children from infected families should not be allowed to go to school until the quarantine is abandoned. The transportation or transfer of acute cases in public conveyances should be strictly forbidden. It would be very desirable to adopt provisional quarantine measures in suspicious cases in a community where an epidemic prevails. The report of all cases of infantile paralysis to the public health authorities should be enforced by

law, and all deaths from this cause should be properly described and registered. A careful study of epidemics by public health authorities is strongly advised.

(Signed) Robert W. Lovett, M.D.,
Chairman.
Henry Koplik, M.D.
H. Winnett Orr, M.D.
Irving M. Snow, M.D.,
Secretary.

TREATMENT OF BURNS WITH ZINC-PERHYDROL

R. Jacoby has employed the combination of hydrogen peroxide with zinc, known as zinc-perhydrol, in many surgical affections, but has obtained the best results in burns. In recent burns, the pains cease at once when the dressing is applied, and the wounds heal within a few days without the development of suppuration. In old burns, a reaction sets in very soon and cicatrization occurs rapidly. The best method of application is in the form of powder, with four times the amount of talcum, or as ointment with the same amount of vaseline.—*Therap. Monatsh.*, Dec., 1905.

TUBERCULOSIS MOVEMENT INCREASED 700 PER CENT.

From statistics published to-day in the new Tuberculosis Directory of the National Association for the Study and Prevention of Tuberculosis, it is ascertained that over 600 cities and towns of the United States, besides about 100 in Canada, are engaged in the war against consumption, and that on April 1st there were nearly 1,500 different agencies at work in the crusade, an increase of nearly 700 per cent in the last seven years.

The new Directory lists 421 tuberculosis sanatoria, hospitals, and day camps; 511 associations and committees for the prevention of tuberculosis; 342 special dispensaries; 68 open air schools; 98 hospitals for the insane and penal institutions making special

provision for their tuberculosis inmates; besides giving an account of the anti-tuberculosis legislation in every state and in about 250 cities. The Directory, which is the third of its kind that has ever been published in this country, gives the most complete survey of the anti-tuberculosis movement that can be secured, and shows the remarkable growth of this campaign in the last seven years. The first Directory in 1904 showed only 183 organizations and institutions in the entire United States. The second Directory in 1908 reported 649 different agencies, as compared with 1,440 in the new book. Taking these figures as a basis, the anti-tuberculosis movement has increased in force since 1904, nearly 700 per cent., and since 1908, over 105 per cent.

The following table shows the growth of the movement along the principal lines of activity for each year since 1905:

Year	Associations	Sanatoria and Hospitals	Dispensaries	Open Air Schools
Established before 1905	18	111	18	
" during 1905	15	18	6	
" " 1906	18	16	14	
" " 1907	46	30	45	1
" " 1908	109	45	118	2
" " 1909	167	67	59	10
" " 1910	117	68	62	16
" " 1911 (April 1)	21	66	20	39
Total	511	421	342	68

The new Directory is sold by the National Association for the Study and Prevention of Tuberculosis, 105 East 22nd Street, New York City, at cost price, 50 cents postpaid.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

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Editorials

THE CANADIAN OYSTER INDUSTRY

ALTHOUGH, from the standpoint of nourishment, the oyster cannot be considered as of great importance, it will certainly continue to be served at our tables as a delicious condimental food. Doctors and patients alike would be sorry to learn of anything which would tend to restrict the oyster industry; on the contrary, any legislation, any expenditure of private capital favoring its development, would meet with their hearty approval. Hence, as a contribution to the revival of the decadent oyster industry of Canada, we feel pleasure in placing before our readers an abstract of data on that subject, recently published in a report of the Commission of Conservation. Even though the duty of from 17 1-2 to 25 per cent. on oysters in the shell, and from 1 1-2 cents to 3 cents a pint for those shelled or preserved should be removed, after reciprocity between the United States and Canada is declared, there is good reason why the oyster industry in Canadian waters should receive encouragement. The demand for oysters is increasing year by year; improved railway facilities have extended the margins of the oyster market far inland. Prices during the past twenty years have increased by fully 240 per cent., and, owing to the destruction of Cana-

dian oyster beds, large quantities of oysters have to be imported from the United States. The total value of oysters imported into Canada in 1909-10 was $316,166, and the duty paid on them was $43,669. In other words, we are now paying to other countries, even if the duty is remitted, $350,000 a year for a food, which we ourselves could produce in quantities more than sufficient to supply home consumption, if only proper safeguards and encouragement were given to the native oyster industry.

Canadian oysters are principally found on the Atlantic Coast. The three provinces that produce nearly all our oysters are Prince Edward Island, New Brunswick and Nova Scotia. British Columbia produces a native oyster (ostrea lurida), which is inferior in size and quality to the eastern oyster. The Canadian oyster industry reached its height in 1882, with a production of 64,646 bbls. During the whole period from 1882 to 1893, the yearly production never fell below 50,000 bbls., save in one year. Since 1891 there has been a decrease in production, the lowest point having been reached in 1907, when only 27,299 bbls. were produced.

The gradual extinction of the Canadian oyster industry has been brought about by "blind disregard for the future shown by those engaged in it and by those charged with its protection." In early years oysters were actually burned, in order to obtain the lime contained in their shells. In winter the oysters were raked up from their beds through holes made in the ice; the large ones sorted out for market and

the small ones left to perish with the cold. As late as 1891 the practice with oyster fishermen was to take the catch to the beach and there sort it over, reserving the large oysters for sale, and leaving the small ones in great heaps on the shore to rot. However, the farmers living on the sea coast took the palm as agents of destruction. They considered that the mud at the bottom of the sea near shore and the oyster shells with their large percentage of lime were valuable as fertilizers of their land, and every winter great power digging machines were to be seen dotting the ice over the oyster beds. These machines cut the oyster beds to pieces and suffocated the oysters around about, by the deposits of mud that settled down as the result of their operations.

Such evil conditions have, it is true, been prevented by restrictive legislation, but much of the damage done to the oyster beds is irreparable. The essential fact to grasp is that the Canadian oyster industry cannot be regenerated by restrictive measures alone. What is needed is the institution of private oyster culture on a large scale; a desideratum, to the accomplishment of which great efforts should be directed. The supreme hindrance to its adoption is the conflict of jurisdiction between the Dominion and the provinces. That difficulty can, however, be solved, and, if done without delay, there is no doubt that Canada's oyster industry would speedily come to its own, and munificently reward the capitalist who invested in it, and the toiler who bestowed his labor on it. J. J. C.

THE PROGNOSIS OF GASTRO-ENTEROSTOMY

In reference to the prognosis of gastro-enterostomy, Pierre Delbet, Professor of Clinical Surgery in the Medical Faculty of Paris, sums up the case very neatly. He holds that in pyloric or juxta-pyloric ulcers, accompanied by retention of the contents of the stomach, the prognosis of gastro-enterostomy is good, and this operation is called for when medical treatment has proved unavailing. In ulcers of the stomach, the indication for the operation is much more open to argument. In real duodenal ulcers (by which he understands ulcers of the duodenum, placed at some distance from the pylorus) he thinks that gastro-enterostomy is not sufficient and that the pylorus should be closed, especially when the indication for gastro-enterostomy is furnished by hemorrhage.

In studying, by the X-rays, the results of the digestion of food in patients who had been operated on for gastro-enterostomy, it has been observed that the food, which at first was discharged through the artificial opening, resumed little by little the pyloric route and that, after some time, the artificial opening was no longer used. It would not be fair to conclude, however, that for this reason the operation was useless, for Leo Schulter, who has observed this phenomenon in two cases, thinks that a gastro-enterostomy, by ameliorating the ulcer and lessening spasm, renders the pylorus permeable. There are cases,

however, in which it was seen that the anastomotic orifice was anatomically obliterated. This result was not due to cancer and the formation of a neoplasm at the new orifice; but was caused by fresh ulcers. Hartmann has shown that this condition was caused by fresh ulcers developed at the very site of the artificial orifice. Delbet also makes some observations on jejuno-peptic ulcers. These ulcers develop either at the artificial orifice itself or on a neighboring part of the jejunum. They are only observed in patients who have been operated on for ulcer, that is to say in cases in which gastric hyperacidity has been the chief exciting cause of the disease. In Delbet's opinion, of the different varieties of gastro-enterostomy, the Y operation, which exposes the end of the jejunum to the hyperacid secretions of the stomach, is the most likely cause to bring about this lesion. Exalto proves this contention both by experiment and by statistics. The latter author also shows that jejuno-peptic ulcers occur more commonly after anterior gastro-enterostomy than when the anastomotic opening in the stomach is made posteriorly.

According to Delbet, gastro-enterostomy always gives appreciable results in pyloric cancers, because it saves the patient from death by starvation. In pyloric or juxta-pyloric ulcers the remote results of gastro-enterostomy taken altogether are good. In gastric ulcers the remote results are mediocre, and it is difficult to formulate the indications for the operation in such cases. He thinks that in them cholecystogastrostomy (with or without gastro-enter-

ostomy) would be the most serviceable operation. According to Delbet, in real duodenal ulcers the remote results of simple gastro-enterostomy are poor; occlusion of the pylorus should then be added to gastro-enterostomy. J. J. C.

PROOFS OF DEATH

In a case of apparent death, viz., in a person who for five minutes has been immersed under water, what are the proofs that death has taken place? We feel quite confident that the medical reader will at once exclaim: The absence of circulation and respiration for at least an hour; the gradual cooling of the body to the temperature of the air, the trunk remaining warm while the members are cold, and, finally, a gradual supervention of a rigid state of the muscles successively attacking the limbs and trunk and ultimately spreading through the whole muscular system. As Taylor remarks, "When such conditions are observed, the proofs of death are conclusive; it is unnecessary to wait for any sign of putrefaction. These changes are certainly the forerunners of putrefaction, as the process of putrefaction is itself the forerunner of the entire destruction of the body."

These statements of Taylor, which are in accordance with the teachings of medicine, and in agreement with the ordinary observation of mankind, have recently met with a denial in an editorial which appeared in *The Catholic Register and Canadian*

Extension, August 17, 1911. The quotation is as follows: "It is almost certain that in many cases of apparent death the soul lingers in the body for a considerable time after respiration and heart action have ceased. Even the rigor mortis is not conclusive proof of death and people have been restored to life after this condition had set in."

We confess that the last statement in this quotation is news to us and we should very much like to see the evidence in its favor.

It is quite true that the rigor mortis is not a conclusive proof of death. The only certain sign of real death is the commencement of putrefaction. But when cessation of respiration and circulation have been accurately noted in the case of a person taken from the water, and when, six hours after immersion of the body, rigor mortis supervenes, these changes are certainly the forerunners of putrefaction, as the process of putrefaction is itself the forerunner of the entire destruction of the body.

J. J. C.

SIR WATSON CHEYNE

This representative British surgeon who left Toronto last week will carry back with him to England the memory of a canoe trip such as no country other than Canada could have supplied. Starting in at Biscoutasing on the main line of the C. P. R. west of Sudbury, he and his Indian guides, accompanied by

AUBREY FALLS, MISSISSAGUA FOREST RESERVE.

Photo by Dr. N. A. Powell.

his son and by Dr. Geo. Strathy of this city, climbed by river, bay and lake to the height of land and then came down the Mississagua through the forest reserve to the north shore of Lake Huron. The writer of this note, himself no stranger to the region traversed, has described the route followed as the most beautiful canoe trip in the world. Two hundred and fifty miles of river, lake and portage, with sixty miles of rapids surely gave to our guest a startling change from Harley Street and King's College Hospital. On the way moose, red deer and timber wolves were often encountered.

Aubrey Falls, which is a series of cascades, plunges down 165 feet, is one of the scenic gems on this too little known waterway. The photograph here reproduced was taken late in the afternoon and does but scant justice to its majestic beauty.

May we express the hope that Sir Watson will have gained in the infinite restfulness of these northern wilds and on the white waters through which he came without mishap a store of energy to be used in preparing for publication a new edition of his Manual of Surgical Treatment—the most useful work for a practicing surgeon or for a teacher of surgery to be found in any language.

In this connection one recalls with interest the description written thirty odd years ago by W. H. Henley of one of Lister's house surgeons—the one of whom we are just now writing. The promise of these earlier years has not been disappointed in the

career of the man who more than any other has made Listerian surgery known throughout the world:

HOUSE SURGEON.

"Exceeding tall, but built so well his height
Half-disappears in flow of chest and limb;
Moustache and whisker trooper-like in trim;
Frank-faced, frank-eyed, frank-hearted; always bright
And always punctual—morning, noon and night;
Bland as a Jesuit, sober as a hymn;
Humorous, and yet without a touch of whim;
Gentle and amiable, yet full of fight.
His piety, though fresh and true in strain,
Has not yet whitewashed up his common mood.
To the dead blank of his particular Schism.
Sweet, unaggressive, tolerant, most humane,
Wild artists like his kindly elderhood,
And cultivate his mild Philistinism."

—N. A. P.

PERSONALS

Dr. Murray Macfarlane, of Carlton Street, moved into his handsome new house, No. 190 Bloor St. E., ten days ago.

Dr. Howard A. Kelly, of Baltimore, Md., and Ahmic Lake, Ont., had to break in upon his recent vacation and have a troublesome chole-cystitis treated surgically. He has been making an excellent recovery and expects to be back in camp next week. Dr. Kelly has promised to visit Toronto and give an address before the Academy of Medicine some time this fall.

Obituary

DR. EDWARD ADAMS PASSED AWAY AT PORT HOPE

One of the best known homeopathic physicians in Toronto, Dr. Edward Adams, of 596 Sherbourne Street, died suddenly at Port Hope, on September 14th. He had gone there for a few days' outing with friends and was seized with a stroke. He never regained consciousness and died the following day. His body was brought to Toronto. Mrs. Adams was on the Atlantic, homeward bound from England at the time.

Dr. Adams was 65 years of age, and was the son of the late Rev. T. Thos. Adams, a well-known Methodist minister, of Galt. He had practised in Toronto for a quarter of a century, studying in Cleveland and practising in Harriston before coming here. He is survived by Mrs. Adams and two daughters, Mrs. W. H. Eddison, of Philadelphia, and Miss Caro Adams, of Toronto.

DR. ALEXANDER STEWART, OF PALMERSTON

Dr. Stewart commenced practice in Palmerston, Ont., some thirty-nine years ago and continued there until obliged to give up owing to ill health in April of this year. He died in Toronto, September 8th.

The funeral, held at Palmerston on September 11th, was the largest ever held in that town, showing the universal esteem in which Dr. Stewart was held by the community. Members of the medical profession from the neighboring towns of Clifford, Harriston, Mount Forest, Guelph, Moorefield, Drayton, Listowel and Alma gathered to pay their last respects to an able and kindly confrere. In addition to his medical practice Dr. Stewart established and carried on, with much success, the Ontario Vaccine Farm. He is survived by his widow and three daughters.

J. J. C.

News of the Month

A MOST UNINTENTIONAL ERROR

Through an entirely accidental oversight, we neglected to acknowledge in our September issue the fact that ten of the illustrations that appeared in that issue we succeeded in securing through the courtesy of The Palisade Manufacturing Company, of Yonkers, N.Y. It was entirely through the kindness of this firm and their Canadian representative, Mr. R. L. Gibson, of this city, that we were able to reproduce the illustrations in question. We take pleasure in acknowledging this kindness and apologize for this paragraph not appearing last month.

MR. C. NORIE-MILLER APPOINTED UNITED STATES MANAGER OF THE GENERAL ACCIDENT ASSURANCE CORPORATION

Owing to certain changes in the management of the United States Office of The General Accident Assurance Company, Mr. C. Norie-Miller, son of the General Manager, Mr. F. Norie-Miller, has been appointed Joint-Manager of the United States Branch of the Corporation at Philadelphia, with Mr. John A. Kelly, of the firm of Kelly & Fuller, New York City. Mr. C. Norie-Miller was appointed Manager of the Canadian Branch in Toronto in 1906, and during the past five years has made a splendid name for himself in the insurance world. As the United States Branch of the Corporation is one of its most important ones, it is certainly an honor of no mean order that has been conferred upon Mr. Miller.

Mr. Miller was born in Scotland twenty-nine years ago. Having completed his education at Glenalmond College, Perth, he started his business experience in Philadelphia with the Head

Office of the Company in the United States, where he remained a year. He was later transferred to the office in Paris, France, and devoted the next eighteen months to the agencies of the company throughout the continent. We take this opportunity of congratulating Mr. Miller upon his new appointment, and wish him every possible success in his work.

PRIZE ESSAY

Under the American Society for the Study of Alcohol and Other Narcotics.

Dr. L. D. Mason of Brooklyn, N.Y., Vice-President of the Society, offers a prize of $150 for the best essay on the following topic:

"THE BIOLOGICAL AND PHYSIOLOGICAL RELATIONS OF ALCOHOL TO LIFE."

The essay must be the result of original research which shall confirm or disprove the present theories of the inherited effects of alcoholic degeneration and indicate how far the defects of the parents are transmitted to the children.

Such work may be carried on in man or animal, and the results may be illustrated by drawings or photographs, and must be typewritten and sent to the office of the secretary before July 1st, 1913.

This offer is open to students in all countries, and each essay should be accompanied by a motto and a sealed envelope containing the same, with the author's name and address.

A committee of award, of which Dr. W. S. Hall, Professor of Physiology in the Northwestern University, Chicago, Ill., is the chairman.

All inquiries should be addressed to Dr. T. D. Crothers, Secretary, Hartford, Conn.

The New Editor of the Buffalo Medical Journal.—It will interest Canadian Physicians to hear that Dr. A. L. Benedict has assumed editorial charge of The Buffalo Medical Journal, now approaching its sixty-sixth year. We know of no one better able for so important a duty, and wish our brother editor god-speed.

Dr. Benedict was at one time Associate Editor of the old *Philadelphia Medical and Surgical Reporter,* and for several years Editor-in-Chief of *The American Therapist.* He is also the author of *Golden Rules and Dietetics,* and a well-known gastro-enterologist.

Lynhurst Hospital.—This institution, recently opened on Spadina Crescent by Mrs. Maud Horner, has already had to remove to larger quarters. The new address is number 82 College Street, directly across the road from the Hospital for Sick Children. This house is admirably suited for the purposes of a Private Hospital, having ample room for from 15 to 20 patients. All the rooms are large, airy and well lighted. The operating room has every facility for major surgery, the strictest asepsis being maintained on every hand.

Dr. Howard A. Kelly's Stereo Clinic.—This work, one of the latest by the well-known author, consists of a series of stereograms or stereoscopic photographs illustrating various gynecologic operations, pathological conditions and methods of making examinations.

It is recognized by all that the sense of sight is the one through which knowledge is most quickly and easily acquired.

By means of these stereograms, Dr. Kelly has brought to the library of every surgeon the clinic room and the actual operation so that the various steps of the operation may be studied at leisure.

Instead of trying to catch a hurried glimpse of a rapidly performed operation, one may sit down and view the various steps with almost the realism of the operating room. These stereograms, with their almost perfect perspective, are a great improvement over the ordinary illustration, however well the latter may be executed. As the sterograms are taken during the actual performance of the operation, the individuality of the operation is

preserved as well as the various steps of the operation illustrated.

A careful study of the pictures with the apparatus furnished is like taking a *post-graduate course.* Each stereogram is accompanied by just enough text to bring out nicely the points desired to be emphasized.—From *The Journal American Medical Association.*

Orchard View Hospital.—There was recently opened up, at 2148 Yonge Street, Eglinton, a new Private Hospital, of which physicians will doubtless be glad to take advantage. This institution is known as Orchard View Hospital. It is situated in most ideal surroundings, in a large lot on the west side of Yonge Street, surrounded by fruit trees. Orchard View Hospital can be easily reached by any Metropolitan car. The buildings are situated sufficiently far back from the road not to suffer from either dust or noise. The hospital stands at no less a height than 375 feet above lake level. It is supplied with the purest spring water, and is only two miles from the North Toronto C. P. R. Station. The house has recently been furnished new throughout and has every sanitary convenience. The rates run from $15 to $20 per week, including board and nursing, and particular care is taken of nervous cases.

The Physician's Library

A Manual of Diseases of the Nose, Throat and Ear. By E. B. Gleason, M.D., LL.D., Clinical Professor of Otology in the Medico-Chirurgical College; Aurist to the Medico-Chirurgical Hospital; Surgeon in Charge of the Nose, Throat and Ear Department of the Northern Dispensary; formerly one of the Laryngologists to the Philadelphia Hospital. Illustrated. Second edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1910. Canadian agents, J. F. Hartz Co., Toronto, Can. Price, $2.50 net.

The appearance of another edition of this very practical work is very welcome. The author has been very particular in giving his description of the methods of examination of patients and has made his book in this way of very much greater use to the general practitioner. The section on the tonsils has been practically re-written; it contains practically everything on the subject. The tests for the hearing contain many practical points that are often left out in large works on otology. A special feature of the book is the chapter dealing with the formulae. This contains 44 pages and forms one of the most valuable parts of the book. P. G. G.

A Text-Book of Medical Diagnosis. By James M. Anders, M.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, and L. Napoleon Boston, M.D., Adjunct Professor of Medicine, Medico-Chirurgical College, Philadelphia. Octavo of 1195 pages, with 443 illustrations, 17 in colors. Philadelphia and London: W. B. Saunders Company. 1911. Cloth, $6 net; half-morocco, $7.50 net. Toronto: The J. F. Hartz Co.

The authors announce that the special purposes of this work are "to furnish an improved method of determining the clinical features of disease . . . . and to emphasize the importance

of correlating symptoms with the structural changes on which they are dependent, and their organismal etiology."

The diseases of the various systems and organs are classified, and methods of examination are discussed under the various group headings. It is not a book one would sit down with for an evening, but offers the salient points of diagnosis of medical diseases in small compass. Practically no disease has escaped the authors. When so much is undertaken (for the nervous system is included) many of the less common or unimportant diseases or conditions must be dismissed in a few words. Sufficient attention is given to laboratory findings to make this feature of great interest and value to the general practitioner.

In a book of such general excellence it would perhaps not be amiss to suggest that in a future edition more care be given to the chapter on inspection of the chest, to the article on diagnosis of incipient tuberculosis and to the paragraph on blood in the stools. Many of the illustrations would appear to better advantage if new cuts were made or paper of a different quality used. The extent of the work is indicated by the fact that 51 pages of index have been found necessary. J. H. E.

"Cesare Lombroso, A Modern Man of Science." By Hans Kurella, M.D.

The subject of this little work is, as its title shows, Cesare Lombroso, the man and the investigator. It does not deal specially with the work of Lombroso as a reformer of criminology and sociology. The contributions of Lombroso have probably assisted more than those of others in the development of our knowledge of the criminal, his idiosyncrasies and the causative relations existing between his crime, his heredity and his environment. The author of this work makes the reader better acquainted with Lombroso's interesting work, and the importance of the study of criminal anthropology.

Anthropology, according to Lombroso's views, embraces all the facts which approximately or remotely determine the being and life of man. His view point was therefore broader than that taken by Verchon, Broca and Mantegazza. In spite of his conviction that mental diseases are diseases of the brain, Lombroso did not regard the brain as something a man carries around in

his skull, as he does a watch in his pocket. Rather, he studied the sick brain of an acute maniac with the entire life processes in its dependence upon the social conditions of life in its subordination to hereditary influences, and this inheritance he was accustomed to trace back to the first beginnings of organic life, regarding man as a final product of a cosmic causal chain.

After reading this interesting little book, the reader is more than ever impressed with the importance of the work Lombroso did, and this brief review of his contributions to the science, he so much loved, is most instructive. A. J. J.

Diagnostic and Therapeutic Technic. A Manual of Practical Procedures Employed in Diagnosis and Treatment. By ALBERT S. MORROW, A.B., M.D., Adjunct Professor of Surgery in the New York Polyclinic; Attending Surgeon to the Workhouse Hospital, and to the New York City Home for the Aged and Infirm. With 815 illustrations, mostly original. Philadelphia and London: W. B. Saunders & Company. 1911. Canadian agents, The J. F. Hartz Co., Ltd., Toronto, Can.

This is a very interesting and practical book. The author has endeavored to explain the majority of the every-day practical procedures which the general practitioner may be at any time called upon to perform. Various methods of anesthesia are splendidly written. The section on the nose and throat contains about 150 pages; it is very well done and profusely illustrated. We have no hesitancy in stating that the practitioner who has this book in his library will find it one of his best friends.

P. G. G.

Urine Examination Made Easy. A Plan of Examination With the Common Tests Fully Described. By THOMAS CARRUTHERS, M.A., M.B., Ch.B. Second Edition. London: J. & A. Churchill, 7 Great Marlborough Street. 1911.

This book should be on the table of everyone making urinalyses, and if in the examination of any sample the various details laid down can be carried out, the result must be of the most absolute character.

For the busy practitioner, especially for those who are making examinations for Life Insurance Companies, this little book contains all that is best to be remembered, and will save both time, trouble and disappointment. A. J. J.

Half-Forgotten Events.

Messrs. Reed & Carnrick, of Jersey City, N.J., recently published a small booklet under this title. It contains short references to such well-known men as Dr. James Craik, "Washington's constant friend"; Surgeon-General J. K. Barnes, who attended in their last illnesses Presidents Lincoln and Garfield; Dr. Robert K. Stone, the first physician to reach Lincoln after being shot; Dr. Physick, of Philadelphia, who was among the first to use internally gastric juice in the treatment of ulcers, and short, succinct accounts of "Time-Dimmed Medical Events." Send for a copy, Doctor. It may be had for the asking.

Stedman's Medical Dictionary. Edited by Thomas Lathrop Stedman, A.M., M.D., editor of "Twentieth Century Practice of Medicine" and "Medical Record." Published by William Wood & Co., New York.

A practical dictionary of words used in medicine, with their derivation and pronunciation, including Dental, Veterinary, Chemical, Botanical, Electrical, Life Assurance and other special terms, Anatomical Tables of the Titles in general use and those sanctioned by the Basle Anatomical Convention, Pharmaceutical Preparations Official in United States and British Pharmacopœias and contained in the National Formulary, Chemical and Therapeutic Information as to the Mineral Springs of America and Europe, and comprehensive lists of synonyms.

In the preface the author suggests that the texicological needs are well met by previously published dictionaries, but that this book is intended not only as a dictionary but also to give the busy practitioner the required knowledge with the least expenditure of time. He has adhered strictly to alphabetical sequence even in tables of arteries, nerves and drugs, an innovation seldom met with in medical dictionaries. A very interesting feature is the brief biological details inserted regardng na-

tionality, profession, etc. In connection with eponymic terms, such as Addison's and Bright's disease, all the terms sanctioned by the Basle anatomical nomenclature are given the preference. As medicine touches on many sciences, other words are introduced with which a physician is likely to meet, and special attention is given to etymology of terms and of words used in medicine. Tables of weights and measures, comparative theremometrical and barometrical scales, chemical elements, etc., are given in the appendix.

This work is well bound in leather, of moderate size and thumb-marked, an excellent reference book for the busy practitioner. R. J. R.

A Manual of Physiology, with Practical Exercises. By G. N. STEWART, M.A., D.Sc., M.D. (Edin.), D.P.H. (Camb.), Professor of Experimental Medicine in Western Reserve University, Cleveland It contains colored plates, with 450 other illustrations. Sixth edition. Published by Bailliere, Tindall & Cox, London. 1910.

The outstanding characteristic of the book is the interweaving of formal exposition with practical work. This introduction of practical work gives the subject of physiology real life. Instead of being a matter of memory, it becomes a subject of earnest investigation. The formal exposition is lucid and is of sufficient detail to make the reading advantageous to the advanced student. R. J. R.

A Tuberculosis Directory, containing a list of institutions, associations and other agencies dealing with tuberculosis in the United States and Canada. Cloth, pp. 332. New York: National Association for Study and Prevention of Tuberculosis, 105 E. 22nd Street. 1911.

This is a new edition of an excellent work, which forms a guide to all the sanatoriums and special hospitals for the tuberculous in the United States and Canada. The last issue listed 240 such institutions, while the present records 422, with an increase in bed capacity from 14,000 to 26,360. The great educational work being done is indicated by the fact that there are now

over 500 voluntary organizations at work in all parts of these two countries.

A very useful feature of the book is the record of legislation affecting tuberculosis in the United States, with typical notification laws, sanatorium and county hospital laws and municipal ordinances. Published by the National Association for Study and Prevention of Tuberculosis, it forms a work of authoritative reference. J. H. E.

Aids to Bacteriology. By C. G. Moor, M.A., F.I.C., and Wm. Partridge, F.I.C. Second edition. London: Bailliére, Tindall & Cox. Cloth, 3s. 6d.; paper, 3s.

This small volume in the Students' Aids Series is pocket-sized and contains 240 pages. It is thoroughly up-to-date and clearly written. In short form, it deals with everything bacteriological from immunity to such practical things as air and milk. It is apparently mainly written for student examination purposes and answers that purpose admirably. G. S. S.

Dialect and Other Poems. By George A. Williams, M.D., Bay City, Mich.: The Gregory Press. 1910.

We have read with pleasure Dr. Williams' poems. In "The Black Cat," "Muskrat on Sheboyganin," "Hard Eggs," "Thanksgiving," "Easter Echo," "Uncle Joe's Reception," there are reminders of the versified French-Canadian English which made Dr. Drummond famous. In "Rindfleisch," "Yankee Doodle" similar popular notions are expressed in a versified form of German-English. "The Bear's Picnic" and "No Use to Worry" are jolly exemplars of the colored man's song. Strike the lyre again, Dr. Williams. J. J. C.

International Clinics. Edited by Henry W. Cuttell, A.M., M.D., with collaboration of eminent physicians and surgeons of America and Europe. Twenty-first series, Vol II. 1911. Philadelphia and London: J. B. Lippincott Co.

This volume of 297 pages contains a number of valuable contributions. Turton's article on constipation is exceedingly well written. Crunston writes in an interesting way of the suppurative processes occurring in typhoid. Breakstone has a well illus-

trated paper on the operation of circumcision. Thomas describes the intravenous method of administering salvarsan, illustrated with good plates. These are but some of the twenty-seven papers which appear in this volume relating to medicine, surgery, obstetrics and gynecology, with some special articles, such as Zeutinayer's on Refraction by the General Practitioner.

International Clinics continues to supply splendid reading. It is a good volume to carry away for vacation reading and will be useful for reference afterward. J. H. E.

What to Eat and Why. By G. Carroll Smith, M.D., Boston, Mass. Octavo of 310 pages. Philadelphia and London: W. B. Saunders Company. 1911. Price, $2.50 net.

This is an effort to place Dietetics before the profession in a practical form and free from all but the essentials of food chemistry and diet lists. The work treats of the various diseases, giving enough of the etiology and morbid conditions necessary for the " Reasons Why " in the treatment by diets. We might describe it as a small handbook on Practice of Medicine, with some little reference to drugs, but the main feature of the work is the diet. As an example of the scope of the work, we may take, for example, acute nephritis, which is taken up under the following headings, *viz.*, Conditions of Kidney, Principles of Treatment, Removal of Edema, Liquids in, Addition of Solids to the Diet, Proteins in Uremia, Preventing Relapses, Diet in Mild Cases, Solid Food in Diet of Chronic Cases, Liquids in Chronic Cases, Meat in Diet. In a number of diseases diet lists are given. Those interested in dietetics or nursing will find this a very useful little work. W. J. W.

Golden Rules of Pediatrics. Aphorisms, observations and precepts on the science and art of Pediatrics, giving practical rules for the diagnosis and prognosis, the essentials of infant feeding and the principles of scientific treatment. By John Lahorsky, A.B., M.D., Clinical Professor of Pediatrics, Medical Department Washington University, St. Louis, ex-President of the St. Louis Pediatric Society, Attending Physician to the Bethesda Foundlings' Home and the St. Louis Children's Hospital, Member of the American Medical Association

and the St. Louis Academy of Science, Author of *Baby Incubators,* etc., with an introduction by E. W. Saunders, M.D., Emeritus Professor of Diseases of Children and Clinical Midwifery, Medical Department Washington University, St. Louis, etc. St. Louis: C. B. Mosby Company. 1911.

This work of 284 pages is divided into five different parts.

Part I.—Golden Rules of Diagnosis.

Part II.—Golden Rules of Prognosis.

Part III.—Golden Rules of Hygiene and Infant Feeding.

Part IV.—Golden Rules of Treatment.

Part V.—Formulary.

This is the Second Edition, and consists of Aphorisms, Observations, and Precepts on the subject of Pediatrics. It is excellent of its kind and should be in the hands of every student and young practitioner. W. J. W.

Thoughts of a Catholic Anatomist. By THOMAS DWIGHT, M.D., LL.D., Parkman Professor of Anatomy at Harvard. Longmans, Green & Co., Fourth Avenue and 30th Street, New York, London, Bombay and Calcutta. 1911.

Can a man believe in the doctrine taught by the Catholic Church about the creation of man and also be a man of science? There is a conflict between Catholic faith and science respecting this question, and there is no use in trying to dodge that issue. Dr. Dwight essays to show that faith in the teachings of revealed religion and in the teachings of science are not incompatible after a certain fashion; that is to say, he sticks to science as long as science has an unassailable locus standi in the argument, but, when science abandons observed facts and appeals to the imagination, he drops science and clings to revealed religion.

Dr. Dwight's book is quite readable. We like him best when he talks about anatomy, which is his subject, and when he gives his own observations instead of merely repeating or criticizing the theories and opinions of other men. Strange to relate, he passes over unmentioned one very marked difference in the musculature of man as compared with that of the monkey, *viz.,* the insertion of the tendon of the plantaris into the os calcis in man; the passage of the tendon of the plantaris in a groove of the calcis and its insertion into the plantar fascia in the monkey.

A monkey cannot remain erect for long, owing to the pull on the tendon of his plantaris, which is caused by his assumption of the erect posture, and the animal drops with relief on all four hands. In man the plantaris is an accessory to the gastrocnemius, extending the ankle if the foot is free or bending the knee if the foot is fixed. Perhaps Dr. Dwight might retort, in man the plantaris is small and is merely a rudiment of a large muscle in the monkey. However, he would not go so far as to say that in the distant part the plantaris of some favored monkey, failing to reach the plantar fascia, selected instead an attachment to his os calcis, and that this abnormality was perpetrated in his descendants, who ceased to go on all fours and took to using their hind hands for feet.

Dr. Dwight deserves to be complimented on his very timely book, which should be welcome to educated laymen as well as to physicians. J. J. C.

Successful Medicine. How is that for a good name for a medical journal—read it again—placing the accent on "Successful!"

Doctor, are you *satisfied* with your income?

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"Successful Medicine" is a new and distinctive journal, devoted to the "dollars and cents side" of medicine. It is confined mainly to office practice, and more especially to *remunerative* office practice, and is essentially a *journal of commercial medicine;* no ultra-scientific and technical dissertations, but only facts brought out in the experience of men who are actually "making good." A treasure of short, brief, snappy paragraphs, *each containing hidden dollars for you* to seize and apply to your personal circumstances.

Among the many departments will be found the treatment of chronic diseases, office laboratory work, genito-urinary practice, office gynecology, rectal treatment and, in fact, every phase of the most remunerative side of medicine. This journal is published bi-monthly—six issues a year and alternates with *Physiologic Therapeutics*—(a journal published at this office, $1.00 a year) and devoted to the various phases of non-medicinal therapeutics.

Address Successful Medicine (Inc.), 60 W. Randolph Street, Chicago, Ill.

Handbook of Suggestive Therapeutics. Applied Hypnotism. Psychic Science. A manual of practical psychotherapy designed especially for the general practitioner of medicine and surgery. By HENRY S. MUNRO, M.D., Omaha, Nebraska. Third edition; revised and enlarged. St. Louis: C. V. Mosby Company. 1911.

That this branch of therapeutics has been grossly neglected by practitioners in general is to be lamented. How much there is in suggestion, how much there is in facial expression, how much there is in imitation can only be estimated by the observant physician. I once found my chloroform bottle nearly empty, and, after putting all I had on the mask, I continued the anesthesia with water. The patient got the impression of chloroform, and by my suggestion, and pouring on small quantities of water, she went through her labor until the end of the third stage, and said she felt nothing. I am convinced there is much to learn in psychotherapy. A. J. H.

One Hundred Surgical Problems. The Experience of Daily Practice Dissected and Explained. By JAMES G. MUMFORD, M.D., Visiting Surgeon to the Massachusetts General Hospital; Instructor in Surgery, Harvard Medical School; Fellow of the American Surgical Association, etc. Boston: W. M. Leonard, Publisher. 1911.

This is a book of clinical histories, in which are given pen pictures of actual patients. The volume presents one hundred such pictures, classified into groups, with full details as to symptoms, diagnosis, treatments, and results.

The book is certainly most practical, and should find a ready sale. The X-ray plates are splendidly executed, and add materially to the value of the volume. W. A. Y.

Hospital Management. A Hand-book for Hospital Trustees, Superintendents, Training School Principals, Physicians, and all who are actively engaged in promoting hospital work. By CHARLOTTE A. AIKENS, Author of "Hospital Training-School Methods and the Head Nurse," "Primary Studies for Nurses," "Clinical Studies for Nurses." 12mo. of 488 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $3.00 net. Sole Canadian Agents: The J. F. Hartz Co., Ltd., Toronto.

This is one of the most useful manuals yet published regarding hospitals. Among the list of contributors we find the names of Drs. Henry M. Hurd and C. P. Emerson, late of Johns Hopkins; George P. Ludlam, late superintendent of New York Hospital, New York; Dr. J. N. E. Brown, Secretary of the American Hospital Association; Dr. W. L. Babcock, President of the American Hospital Association; Dr. R. R. Ross, Superintendent of Buffalo General Hospital; Charlotte Aikens, the authoress of numerous hospital publications, and several other hospital enthusiasts. Each writes a special article. Some of the subjects dealt with are: The Board of Managers and Their Responsibility; The Superintendent; The Medical Service; A Hospital for One Hundred Patients: The Furnishings for a 100-Bed Hospital. Other articles deal in an up-to-date way with questions of income, bookkeeping, stores, kitchen, laboratory, dieteties, laundry, purchase of supplies, training school, out-patients, reports,—all

showing the practical nature of the publication. An appendix contains suggested regulations, a list of dietaries, and incorporates the report of the American Hospital Association on Training Schools.

We bespeak a large sale for this excellent book, and congratulate Miss Aikens on its production. Dr. C. P. Emerson's article on The American Hospital Field, the opening chapter, should be read by every hospital worker in the land.

Urinary Surgery. By F. S. Ridd, M.B., F.R.C.S., Assistant Surgeon to the London Hospital. London: Longmans, Green & Co. 1910.

Within the last decade the exact diagnosis of many urinary diseases has been notably advanced.

The author of this monograph is an acknowledged expert in such matters, and he points out four leading directions along which progress has been made.

First, by ureteral catheterization and the examination of urine obtained separately from each kidney, the surgeon is now able to estimate the functionating power of those organs and the safety or otherwise of operative interference.

Second, by the evolution of X-ray methods of examination and, what is of equal importance, the interpretation of radiographic shadows.

Third, by the development of the bacteriology of the urine as a guide to the treatment of infective processes.

Fourth, by great improvements in the operative treatment of prostatic enlargements.

Mr. Ridd has aimed at making these advances available for those who have to deal with urinary diseases in their earlier and curable stages.

The paramount importance of accurate diagnosis *without loss of time* is the keynote of the book and the expedients by means of which this can be accomplished are explained with clarity and with precision. The alternative—symptomatic treatment—has had its day, has been thoroughly discredited, and must give way to the methods which it is the purpose of the book to bring within the reach of the general practitioner.

The author is to be congratulated upon the skill with which

his task has been performed. He has given us a monograph thoroughly up-to-the-hour, accurate, well-balanced, readable and helpful. N. A. P.

Quinquennium of Medicine and Surgery. 1906 to 1910. Edited by J. W. Ballantyne, M.D., F.R.C.P.E. Edinburgh: William Green & Sons. 1911.

In this volume Professor Ballantyne presents to the profession, in pen and ink, the past five years of medicine and surgery. The book is arranged alphabetically, and to all intents and purposes is an up-to-date dictionary. Under each head there is given the latest views regarding treatment of that particular disease, so that no medical man can misspend the small amount involved in the purchase of the book. W. A. Y.

A Text Book of Alkaloidal Therapeutics. Being a condensed resume of all available literature on the subject of the active principles added to the personal experience of the authors. By W. F. Waugh, M.D., and W. C. Abbott, M.D. Third edition, revised and enlarged. Chicago: The Abbott Press. 1911.

To physicians interested in Alkaloidal remedies, this book will prove of invaluable interest. It is concise and to the point, so to speak. I have personally had some very gratifying experiences with these preparations, and consider them the acme of up-to-date medicaments. A. J. H.

Merck's Manual of the Materia Medica. (Fourth Edition.) A Ready Reference Pocket Book for the Physician and Surgeon. Containing a comprehensive list of chemicals and drugs—not confined to "Merck's"—with their synonyms, solubilities, physiological effects, therapeutic uses, doses, incompatibles, antidotes, etc.; a table of Therapeutic Indications, with interspersed paragraphs on Bedside Diagnosis, and a collection of Prescription Formulas, beginning under the indication "Abortion" and ending with "Yellow Fever"; a Classification of Medicaments; and Miscellany, comprising Poisoning and Its Treatment; and an extensive Dose Table; a chapter on Urinalysis, and various tables, etc. (Merck &

Co., 45 Park Place, New York. 1911. 493 pages. While intended for distribution in the United States, a limited number of copies have been set aside to supply requests from members of the medical and pharmaceutical professions in other English-speaking countries. Mailed on receipt of application, accompanied by postal money order for 1s. 6d., or 35 cents.)

"Poor Richard's Almanack."—We were recently favored by The Arlington Chemical Co., of Yonkers, N.Y., with a copy of "Poor Richard's Almanack." This brochure is one of the firm's latest productions, and is extremely clever. We understand that a copy has been sent to every physician in the United States and Canada. It is a very unique piece of advertising, and any of our readers who have not as yet received a copy can do so for the asking.

GRAPE JUICE INVIGORATING TO THE SICK*

In order to be able to procure a good grape juice, it is most important that care be used in the choice of the fruit to be used. In the best vineyards, the bunches of grapes are carefully sorted, the ripest being put aside and pressed by themselves, though in some places even the individual bunches are analyzed and the best berries cut out with scissors, to be used separately. Just such care as this is exercised by Mr. E. D. Smith, of Winona, Ontario, who manufactures one of the best grape juices in the province—all of his fruit is picked, so that the grape juice turned out from his factory is rich in color, mellow in odor and stimulating in effect. This grape juice is found exceedingly palatable to the sick, containing just enough stimulating quality to be beneficial to those convalescing from illness. In warm weather, physicians will find Smith's Grape Juice *particularly beneficial* when *iced,* more especially in cases of fever, and also in gastric affections—medical men know themselves that many so-called grape juices are strongly fortified and for that reason are robbed of their beneficial effect to the sick. Smith's Grape Juice *is the pure article,* and *will be found to be all that it is represented.*

Publisher's Department.

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Original Contributions

PRESIDENTIAL ADDRESS—THE ACADEMY OF MEDICINE, TORONTO

By Dr. N. A. Powell.

First, before all else, it becomes my pleasant duty to thank the Fellows of the Academy for placing me in the position I occupy.

The honor came unsought and is for that reason all the more appreciated. I count it no light thing to have been thought worthy to follow those recognized leaders of the profession who have been previously accorded the highest office in your Society. The evolution of the Academy from the societies, by the union of which it came into existence, is in line with medical progress the world over. In all great centres of civilized population the day of the small medical society, of the proprietary medical school and of the ill-equipped hospital is passing or has already passed.

Modern life with its complexity of needs has made it imperative that bigger and better organizations should replace those which formerly sufficed. To be bigger is not of necessity to be better. While in the changes that are taking place much has been gained, some things of value have been lost. Nelson behind wooden walls needed a generation to gain for England what Togo did for Japan in one morning's use of what modern science had placed at his command.

The Rolph School here, the Woman's Hospital under Sims and Emmett, and the Royal Infirmary under Syme did splendid and long-to-be-remembered work, but just as it has become impossible for any one man to be a universal specialist, so has it come about that no small school, hospital or society can by an effort, however able and however well directed, meet all needs.

> "Our own art is too vast and too complex
> For one man alone to accomplish its purpose
> And hold it shut fast in his hand."

The capital city of Ontario is rapidly approaching the half-million mark in population. Its people have doubled in numbers within the last decade, and its future as one of the great cities of the continent is already assured. On us rests the obligation of seeing that in things medical its progress shall keep pace with its advancement along other lines. A few years ago the four medical societies referred to were doing excellent work in Toronto and making the name of our city and of our country widely known. They voluntarily gave up their autonomy in order that by uniting forces one strong and progressive society should come into existence. It is to the lasting credit of the men who composed these societies that they recognized the trend of modern progress and were content to lose their corporate individuality in promoting a scheme for the more comprehensive unifying of professional interests.

"The intuition of unity is the end of philosophy," wrote Plato.

Already they are receiving their reward in the kindlier feeling that pervades the atmosphere in which we live. Men have been brought into closer relationship, one with another, and warm friendships are replacing jealousies and suspicions which formerly were too much in evidence.

The Academy, with its great and growing library, should be the means for bringing out and of making known all that is best amongst us. A medical school is chiefly of interest to its staff and its students, and a hospital to these and to the patients who fill its wards. The Academy has no such limitations. Here all meet on a level, and one rises above another only

by the better work he is able to do, or the better spirit he displays in doing it. A strong association can afford to assume a sedentary posture on any member who prefers to split hairs rather than to split differences, and whose temperamental bias is toward carping rather than helpful criticism. It would savor of the Pharisee to claim that we are free from all such elements of disturbance, but certainly with us they are minimal. Nine years ago, when President of the Ontario Medical Association, I ventured into the realms of prophecy, and said with regard to certain schemes for improvement, which were then very much *in nubibus,* that "While in the past professional jealousy had been so keen, and controversy so bitter, that success would have been hardly a possibility, now *Laus Deo* we know each other better, and out of mutual respect can come united and successful action. True, we are given to criticizing each other a good deal; but, with a rare exception, this is in the spirit of rivals rather than of antagonists. Old animosities are dying out and are not being replaced.

"The teeming future,
Glorious with visions of a full success,"

holds for us a grand, united and splendidly equipped school of medicine, doing for the students of a coming time what in an imperfect and patchy way we are striving to accomplish now.

"I have faith in that future and in the men who shall sway its destinies, and believe that with absolute fairness to all real interests the wisest course can be found and followed."

Do I make an undue claim in saying that the forecast of the future then given was at least as accurate as the average of recent political forecasts in what is geographically the larger half of North America?

The boards governing our larger hospitals are fully awake to the needs of the present and of the future. The new Toronto General and the Western Hospitals are engaged in extensive building operations. St. Michael's is adding a new wing to its present building. Bearing the name of a Saint, who, if my memory serves me rightly, is mentioned but four times in the Bible—and every time fighting—we shall expect this hospital to keep well in the foreground.

The Hospital for Sick Children is always adding to its facilities, and Grace, we are hoping, will soon take similar action. It may well be a matter for mutual gratulation, that these various institutions, through their boards and staffs, aided each other in obtaining civic and other grants.

This is as it should be, but not as it would have been under conditions that formerly were present with us. I yield to no one in my admiration for what our predecessors, in the face of untold difficulties, were able to accomplish. Fortunately we may honor them and honor the work they did, without being tied in any way to the precedents they established. There were giants in those days: Rolph and Widmer, Bovell and Beaumont, Hodder and Richardson, were men of whom any city might be proud.

But great lights by their very intensity cast deep shadows, and these shadows are the occasion of much stumbling. Less brilliant globes make our streets as safe by night as by day, although no one of them can be said to far outshine its fellows. That we have come closer together and are more mutually helpful is surely true, but still it would be premature to hold that the medical millennium is even within measurable distance of No. 13 Queen's Park.

Where we stand, however, is not nearly as important as the direction in which we are moving. To-night I want to speak to you regarding one line along which we may soon and rapidly advance. The members of this Academy are, I feel sure, broad enough to permit me to do this without being charged with giving undue prominence to a single institution or to my own part in what is being done or to be done.

Demosthenes made his hearers forget the speaker in the interest he led them to take in his subject, but I am as far removed in skill as in time from that hero of our schoolboy days. Montaigne's aphorism, that one seldom refers to himself without detriment to the person spoken of, will warn me to guard my utterances in so far as they must be personal.

In the year 1898 it fell to the lot of the speaker to suggest a way in which a certain ample fortune could be used for the permanent benefit of our people. Many plans were passed in review before a final decision was reached. What was decided

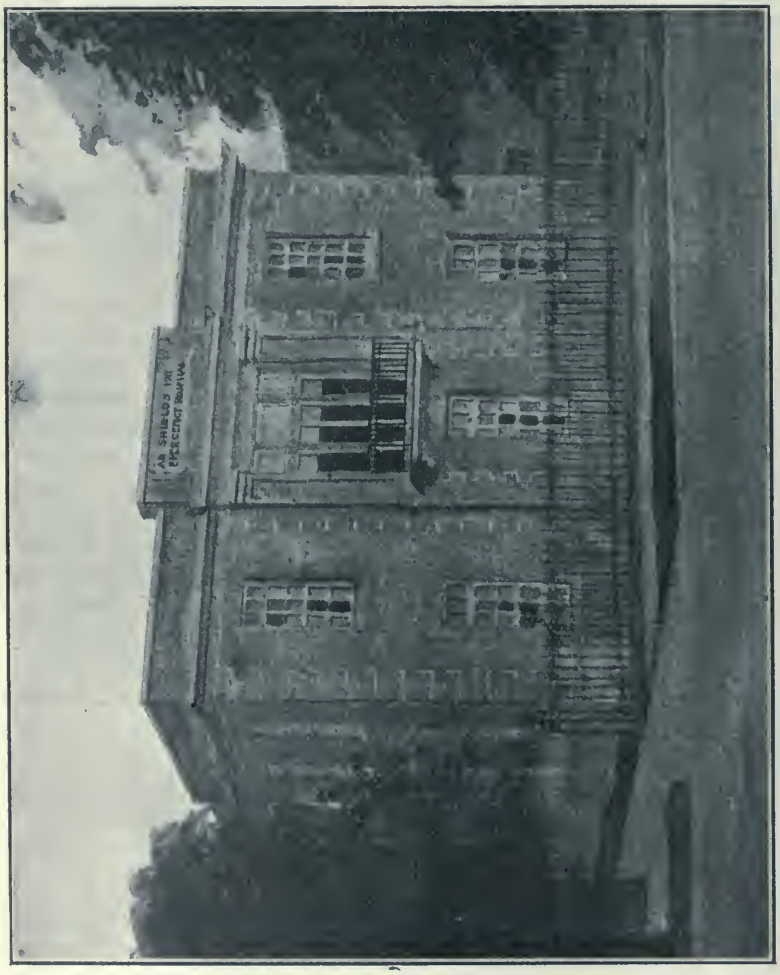
upon at last involved substantial gifts in aid of the care of sick children, of the treatment of pulmonary tuberculosis, of missionary efforts, and of various other great charities, but reserved for a single purpose the bulk of what was to be devised. This purpose was to build, equip and maintain in perpetuity an emergency or casualty hospital, which should afford prompt and skilled relief to those injured or taken suddenly ill.

That a need exists for such assistance in all large cities admits of no question. When supplied by the regular service of a general hospital, it is apt to be attended by delays, and to disarrange the work of the staff. The Relief Station at Haymarket Square, connected with the Boston City Hospital, and the Hudson Street Hospital, which is the Casualty Department of the New York Hospital, are the best institutions of the kind to which I can refer. Each has a staff of its own and the patients admitted are soon transferred to the parent hospital. In Scotland a similar plan is found to be most satisfactory. In every great modern hospital a department like this must be given a place. On this continent, be it remembered, we have no great modern hospital complete in every detail. Years must elapse before anything approaching the Rudolph Virchow Hospital or two or three others in Europe can become available.

If the dreams of the architects are realized, Blackwell's Island will have one and Cincinnati another, but a million people must make their homes in Toronto before anything so extensive and costly is undertaken here. By that time we shall all be elsewhere. In the meantime Browning's statement holds good:—

> "The common problem, yours, mine, everyone's,
> Is not to fancy what were fair in life,
> Provided it could be—but finding first
> What may be, then find how to make it fair
> Up to our means."

Now an emergency hospital is of necessity altruistic rather than revenue-producing. Its per-diem and per-patient cost must be out of all proportion to what is usual throughout the country. A hospital board with deficits to face can hardly apportion to one department such as this all that is needed to maintain it at



SHIELDS EMERGENCY HOSPITAL.

its maximum degree of efficiency. On the other hand, the board of a general hospital, to which patients can be transferred, is the best possible body in which its control can be vested.

My suggestions were accepted by the donors at the time, and subsequently by the General Hospital Trust. This latter body also agreed to place the general direction of the Shields Emergency Hospital, as it will be called, under the chiefs of the surgical service, and asked me to undertake with the architects the work of building and organizing this special department. It is with real pleasure that I now refer to the way in which Mr. Flavelle, Chairman of the Trust Board, the President of the University, the Deans (past and present) of the Medical Department, the Professor of Surgery, the chiefs of the Surgical Service and the architects have always and in all ways given their assistance in what has so far been accomplished.

The names of the donors were withheld until last year, when litigation regarding the site selected led to their publication. Let me break the seal of my own silence through all these years, and say that Agnes and Jane Shields, in loving memory of their brother, John Shields, have made possible this addition to the city's facilities for giving aid to the suffering. Horace wrote, "I have builded unto myself a monument more enduring than brass." Surely in what they have done for humanity these noble women have builded better than they knew, and their names will be honored by generations yet to come, and by thousands to whom their gift will bring relief in times of sore distress. "*Divinum est opus sedare dolorem.*" These words, through all the centuries, come down to us from that far isle which held Hippocrates. In spite of the burden of her years, the one who is still with us follows with deepest interest the progress of the building and the plans for its outfitting. As she has discussed these matters with me I have seen the joy of giving in her eyes, and the words of Dr. Holmes have crossed my mind: "If the good Lord will go on making splendid women He must not blame us for thinking too much of His earthly manifestations."

An ambulance service with swift self-propelled vehicles, such as are needed in a city stretching twelve miles along the lake and running half as many miles back from the water's edge, will form

a part of the equipment. It is designed to have house surgeons go out with the ambulances in answering all calls. The cost of the hospital, when complete, will approximate $75,000. It will have five operation, dressing or clinic rooms, and twenty-two beds.

A belief that every physician in Toronto, and in particular every Fellow of this Academy, will at times find this new department a God-send, has led me to take it up in addressing you to-night. Its work must be upon broad lines, and with due and fair regard for all interests. The interest, first of all, of the sick or injured person, then of his family physician, then of the one who was called upon to give first aid, then of the students here for instruction—all these and many others must be considered and adjusted in a spirit of fairness. The difficulties will lessen notably if we all remember that in what it is given us to do, "One is our Master and all we are brethren."

Within the spirit and letter of the bequest it has seemed to those of us who have the matter under advisement that, outside the regular work of a casualty department, the facilities to be provided may be made useful in a number of ways. Time permits me to refer only to two of these: the teaching of advanced surgical technique in a very personal and practical way and the illustration by stereoscopic and other photographic procedures of the surgical work going on.

If asked to name one particular in which the men who are graduated in medicine with us most seriously fall short, I would answer at once: "In the practical aspects of their surgical training." They spend numberless hours over oil immersion lenses, and become facile in their use, their nates are indurated, and they run the risk of developing Ischial Bursitis by sitting out long didactic courses; they watch operations at long range and through or around assistants, but until they become house-surgeons they are not taught the use of their own hands in doing or in assisting to do surgical work. Later, they learn these things at the expense of their patients, or they do not learn them, and so muddle along in practice. Regarding scores of candidates whom I have recommended for hospital internships across the line, the common report has been: "Your men

are clever and energetic and well up in theory, but they show little evidence of practical surgical training."

Baden-Powell tells grown-ups, as well as boy scouts, that one of the worst habits which may be acquired is that of looking on while others do the work. The right way is to learn to do things right by doing them under supervision, and the earlier this is done the better. We do well what we learn, early in life, to do automatically, and "timely knowledge is no hurt," as the wife of Odysseus told him. It is as easy to learn intestinal anastemosis on material hot from an abattoir as on a portion of human alimentary canal, and it costs less for funerals afterwards. The control of hemorrhage during operation, and the immobilization of fractures may be taken to illustrate the need of the training of the hand. The followers of Ambrose Pare put back the use of the ligature for almost a century by tying masses from which bleeding came, instead of isolating and exactly ligating the cut vessels. To-day en masse clamping and tying goes on in ways that add new traumatism to tissues already devitalized. Complications naturally and commonly follow. What shall it profit a man to have been taught, in a theoretical way, the last refinement of aseptic surgery while still untrained in the deft and skilful handling of tissues with impaired vitality? One sees too often a wound sponged with the movement used in blacking a boot, or a granny knot placed where only a reef should have been tied. Now, a reef knot can be tied in at least seven different ways. One single-handed method, and one (not Heath's) in which both hands are employed are far and away better than the plans in general use and described in our text-books. Teach these modern methods to a student and he will soon make with unvarying accuracy as many knots in a minute as the Mauretania can make in an hour. We cannot expect him to have "Eyes to find the five which five hundred shall survive" out of all the surgical procedures he may see followed by different operators, but the best of these should be taught him practically. From my own student days I recall an unforgettable sentence in a clinical lecture by Sir James Paget: "When I have seen Sir Wm. Ferguson operate I have not known which to admire most—the perfect skill of hand with which everything was done or the perfect way in which every

step of the operation had been thought out and provided for." Work like this is ideal. The other kind is still too common. Dr. Schultz, in Manitoba, in the early days, put up fractures in bark splints padded with moss and secured by buckskin thongs. We all appreciate the value of resourcefulness such as he exhibited, but the foresight which provides at its best whatever may contribute to the recovery of an injured person is more to be commended than any skill in extemporizing makeshifts. My honored teacher, Frank H. Hamilton, warned me not to learn how to put up fractures in outdoor climes, where the work, at that time, was done in haste, cheaply and roughly. The advice would have less force to-day, but still the need for speed and for economy may militate against the employment of means which the surgeon himself considers to be the most efficient. Having given to the teaching of surgical technique more time and attention probably than any of my colleagues, I feel the more free to point out seeming defects as well as possible means for that correction. Our students and recent graduates go to London or Edinburgh, to New York, Baltimore, Chicago or Rochester, Minn., to watch operations, and to learn the methods by which leading surgeons attain success. Now the percentage of success is as great here as anywhere else, and yet the students do not largely attend operations. They claim that to do so is a waste of time. Given a range of thirty feet, and one appendix removal looks like any other one. What wonder, then, that a series becomes monotonous? The remedy appears to be making students practically familiar with what is undertaken, and giving them a chance to follow the details of operative work. This will hold their attention, and they will come to appreciate the ever-changing problems which lie at the point of the scalpel.

I am glad to tell you that, after consultation, those in authority have thought it best to approve of a large clinic room in the emergency hospital being set apart for surgical demonstration and fitted up with a lantern and whatever else may be found of advantage. With such facilities, it ought to be possible to prevent any candidate for a degree making, as one did recently, a mistake in the sex of a catheter, not to mention errors of a graver nature.

One other line of projected usefulness remains for a moment's consideration. Toronto operators have done, and are doing, more creditable surgery. Their methods and their results have not been presented to the profession as fully as has been the work done in other cities. One reason for this may be that our surgeons are tongue-tied with modesty. Another, doubtless, is that artists, to illustrate the various methods devised or conditions encountered, are hard to find, and expensive when found. Now, by stereoscopic and by color photography, it has become possible to portray with great fidelity almost anything that may require illustration. A plant for doing such special work in photography will be available in the new hospital, and whatever assistance can be given in preparing illustrations for papers written by the members of the Academy will be freely at their disposal.

In conclusion, may I ask of the members of our Academy sympathetic co-operation in making the gift now spoken of a real blessing to the people for whom we care. With your help, and with the continued assistance of the gentlemen whom I have mentioned, it may be given me to see what will amply repay the study I have given to the problems of emergency surgery for more than a dozen years and in more than a dozen cities. I want to see the new charity started on right lines and doing much good before my time comes to join the group of shades shepherded by Hermes Psychopompus on the banks of Acheron. It may be that all will be forgotten when my camp is pitched in the fields of Asphodel and my canoe glides over the waters of Lethe, but at least I want to take away with me a feeling that I had the confidence of my fellow-workers, and that their confidence was not wholly misplaced.

THE WASSERMANN REACTION

(With a Report of 300 Tests.)

BY GEORGE S. STRATHY, M.D., C.M.,

Medical Registrar, Toronto General Hospital; Assistant Pathologist, Hospital for Sick Children; and

GORDON BATES, M.B.,

Surgical Registrar, St. Michael's Hospital, Toronto; Assistant in Bacteriology, University of Toronto.

THE study of syphilis has been revolutionized in the last seven years by three discoveries, that of the Treponema Pallida in 1905 by Schaudiun; the Amboceptor Reaction in 1906 by Wassermann, and the curative agent Dioxydiamidoarsenobenzol (''606'') by Ehrlich in 1910. The usefulness of Wassermann's diagnostic reaction was recognized from the first, but treatment with ''606'' has so enlarged its application and so increased the interest of the profession in the reaction at the present time that we have thought it wise to publish the results of 300 tests performed in the last eighteen months.

The tests have all been performed in connection with treatment or other clinical work, and we have done practically nothing in the nature of experimental work with the reaction itself.

The Amboceptor Reaction, as Wassermann at first termed it, was the culmination of a series of discoveries by various workers in the field of immunity. The first of these was Pfeiffer's Reaction, which proved that a certain unstable substance called alexin or complement is common to the blood serum of mammalia. This substance was proved to be an essential factor in the defensive forces of the body. It is destroyed by a temperature of 56° C., and is non-specific; that is, it is necessary to the establishment of an immunity quite irrespective of the character of the attacking organism.

With the discovery of the non-specific alexin came also the revealing of the presence of specific defensive agents, each of which is found only in the presence of a particular disease and is absent under any other circumstances. These new substances were called anti-bodies, sensitizers or amboceptors, and the pres-

ent theory is that alexin—which is a universal protective agent—will destroy an invading organism only when that organism has been first prepared by a specific sensitizer.

The third important step in the establishment of the Wassermann reaction was the discovery of complement fixation by Bordet and Gengou. This may be formulated as an axiom in these words, "that when human blood serum acts through its alexin and specific sensitizer against the invading body which has provoked the production of that sensitizer there is tendency to form an insoluble compound of the three." During this process the alexin (complement) becomes fixed and is no longer present as a free protective agent: upon this fact the technique of the Wassermann Reaction rests.

Bordet and Gengou in their investigations used a bacterial emulsion, which they called antigen, and found that by mixing it with patients' blood serum, which had been infected by this organism, fixation of the alexin took place. Wassermann instituted a modification of their methods when, instead of a bacterial emulsion, he used as antigen extracts of organs infected by the bacteria. Since in some diseases—notably syphilis—the bacteria cannot be obtained in pure culture and bacterial emulsions are, therefore, impossible, this constituted an important advance over the methods of his predecessors. By using as antigen an extract of syphilitic liver, he was able to apply the complement fixation reaction in the diagnosis of syphilis.

Bordet and Gengou also invented an indicator to show whether the antibody was present or not. It was known that other substances beside bacteria injected into an animal cause the animal to form antibodies (sensitizers) to that substance. Washed sheep's blood cells injected into a rabbit cause the formation of an antibody which in the presence of alexin (complement) will cause haemolysis or breaking up of those cells. If syphilitic extract, the blood serum of a syphilitic patient (in which complement has been destroyed by heating at 56° C. for 30 minutes) and complement (using the blood serum of a normal guinea-pig) be placed in a test tube for one hour and kept at a temperature of 37° C., the complement is taken up or fixed by the joining of the other two. If now sheep's blood cells and the serum of a rabbit which has been sensitized (immunized) to sheep's blood cells be added

to the test tube haemolysis will not occur, for the complement which is a necessary factor in haemolysis has been taken up by the fixing of the syphilitic system. If, however, the patient's serum was not syphilitic, then it would not combine with the syphilitic extract, the complement would not be taken up, but would still be free, and when the haemolytic system was added haemolysis would occur and the fluid in the test tube become clear. The first result constitutes a positive reaction, the second a negative one. The haemolytic series thus acts as an indicator.

It may be illustrated graphically by the following:

Syphilitic System				Haemolytic System		
Syphilitic Antigen	+ Syphilitic Antibody	+ Alexin (Complement)	+	Sheep Blood Cells (Antigen)	+	Rabbit anti sheep Blood cells (Antibody)
(Sensitizer or Amboceptor)				(Amboceptor or Sensitizer)		

Complement is seen to be necessary to each system. If it is taken up in the syphilitic there is none free to be used in the haemolytic system so haemolysis will not then occur.

The Wassermann Reaction is, then, only an indication of the patient's body reaction to syphilis. For this reason in occasional so-called malignant cases of syphilis, where the patient has no protective reaction or resistance, but is overwhelmed by the infection, the Wassermann Reaction may be negative. Such cases, however, are rare. We have not met with one. Again, where the body reaction is very slight owing to the virulence of the infection having weakened or the resistance having not yet developed, the test may be negative. The latter phenomenon explains the negative reactions sometimes obtained within a week or two of the appearance of the primary sore. The former explains the 20 to 30% of negative reactions obtained in mild tertiary syphilis. In secondary syphilis the test is nearly always positive. A fact which is harder to explain is the high percentage of so-called para-syphilitic cases—tabes, general paresis, aortitis and aneurysm which give a positive result.

The value of a positive reaction is much greater than a negative. Some observers have found positive reactions in patients suffering from scarlet fever, leprosy and malaria. Malarial patients give positive reactions only during an attack or shortly afterwards. Leprosy in Canada will seldom lead to error, but must be borne in mind in interpreting a positive result. These

diseases aside, a positive reaction means syphilis in 100% of cases.

The results of treatment as shown by Wassermann's Test are interesting. Many patients who have undergone two years of treatment with mercury and potassium iodide give a positive reaction. Some patients give a positive result after five years of intermittent treatment. A negative result is possible when a course of mercurial treatment is incomplete. For instance, a three-months' treatment with mercury will frequently yield a negative result. This may occur, even in the presence of marked symptoms; but if treatment is discontinued the reaction becomes positive again in a short time. Results with "606" seem to be more satisfactory, but sometimes a second injection is found to be necessary. It is too early to speak of the ultimate results of this treatment. Some workers believe that potassium iodide does not affect the reaction. In two of our cases, however, we have found that its administration has rendered negative a previously positive reaction.

The following is a summary of our results.

	Blood Serum Tested	Cerebro-Spinal Fluid Tested	Positive Reaction	Negative Reaction	Uncertain Reaction
CONGENITAL SYPHILIS.					
1. Undoubted syphilis (with marked clinical symptoms)	2	..	2	..	..
II. Suspected syphilis	1	..	..	1	..
PRIMARY SYPHILIS.					
1. Undoubted primary syphilis—					
(a) Within four weeks of appearance of primary lesion.....	4	..	1	3	..
(b) More than four weeks after appearance of primary lesion	5	..	5	..	..
II. Suspected primary syphilis—					
(a) Within four weeks of appearance of primary lesion.....	2	..	..	..	2
(b) More than four weeks after appearance of primary lesion	4	..	3	1	..

	Blood Serum Tested	Cerebro-Spinal Fluid Tested	Positive Reaction	Negative Reaction	Uncertain Reaction
SECONDARY SYPHILIS.					
I. Undoubted secondary syphilis	42	..	39	2	1
II. Suspected secondary syphilis or secondary syphilis under treatment	54	..	14	34	6
TERTIARY SYPHILIS.					
I. Undoubted tertiary syphilis	28	..	27	1	..
II. Suspected tertiary syphilis or tertiary syphilis under treatment.	67	..	15	43	9
PARASYPHILIS.					
General Paresis.					
I. Undoubted	..	60	58	2	..
II. Suspected	3	4	6	1	..
Tabes Dorsalis	4	1	4	1	..
Aneurysm	8	..	7	1	..
Known Negative	44	..	..	44	..

During the performance of the above series of reactions the following facts were noted. It was found that, in the case of primary syphilis, it was seldom possible to obtain a positive result before a period of four weeks had elapsed after the appearance of the initial lesion. After this period every undoubted primary yielded a positive reaction. Undoubted secondary syphilis yielded positive results in 93% of all cases, while undoubted tertiary cases also yielded a high percentage of positive results. Among the suspected cases which yielded a negative reaction in many instances the subsequent histories proved that the cases were not syphilitic.

In general paresis the relation of that disease to syphilis is demonstrated by a series of 60 cases, 97% of which were positive. Tabes Dorsalis and aneurysms also show their relation to syphilis by a high percentage of positives. It was found in tabes and general paresis that the cerebro-spinal fluid would frequently yield a positive result when the blood serum was negative.

As regards "606" treatment, our statistics are not extensive. In many cases, while a positive "Wassermann" was obtained previous to the injection, it was found impossible to trace a hospital patient and obtain a reaction afterward. In a series of twenty-four cases, in only two was the reaction positive two months after injection. In one of these three injections were given without changing the result. In this connection it may be remarked that a Wassermann performed at a period earlier than six weeks after injection is, as a rule, positive; and for this reason its performance before such a period has elapsed is useless.

TECHNIQUE.

The technique we employ differs but slightly from that originally devised by Wassermann. Dr. Fitzgerald, with whom we were working, tested specific and non-specific antigens. He came to the conclusion that both gave equally satisfactory results, but that an alcohol-ether extract of dog's liver was more stable than the extract prepared from a syphilitic foetal liver. In our tests we have used both.

THE HAEMOLYTIC SERIES.

The testing of the strength of alexin and sensitizer to be used was accomplished by using the following tubes:—

	cc.		cc.			cc.	
A. Alexin	1/20	+	1	5% suspension sheep's blood cells	+	1/500	sensitizer
B. "	1/40	+	1	" " "	+	1/500	"
C. "	1/20	+	1	" " "	+	1/1000	"
D. "	1/40	+	1	" " "	+	1/1000	"

The tube in which haemolysis took place in approximately half an hour determined the standard strength for the day's work. For convenience in handling, alexin and sensitizer were diluted in 0.9 salt solution, 1 c.c. of each solution being used in each tube.

During the test each patient's serum was tested for the presence of specific sensitizer against sheep's blood corpuscles. The antigen was tested daily, in double quantities, for anti-complementary activity. In addition, known positive and negative sera were used as controls with each series.

CHRONIC CONSTIPATION*

By S. H. McCoy, M.D., St. Catharines.

The etiology and pathology of Chronic Constipation is such a broad subject that to do anything like justice to it would require a much longer time than is allotted to a fifteen-minute paper; hence it is my intention to allude to the more salient points in a cursory way, and draw attention to some of the more recent work which has thrown light on the pathology of this most widespread and troublesome malady.

There are few ailments of the human body which carry in their train so much misery, and yet allow the organism to plod on through life, crippled, with the hope some day of emancipation, such hope, however, proving a genuine "will-o'-the-wisp."

What is meant by Chronic Constipation? Infrequency and incompleteness of bowel movement; not necessarily, however, in any individual case, for some people are so constructed that they may have very infrequent movements all their life, and enjoy perfect health; relatively, their evacuations are normal, just as others may have as their normal condition two or three movements per day, and yet be perfectly well. The phenomena of passage of food along the intestines is caused by really two mechanisms. As far as the sigmoid flexure it is under the control of the sympathetic nervous system, and from there on it is also aided, or otherwise, by conscious cerebration. The clinical study of Constipation involves the determination of the site of failure and the mechanism at fault and its reason. Therefore, one sees how necessary it is to institute early and close observation to possibly obviate more serious trouble, if the cause is not discovered soon.

Constipation may, however, be defined as a condition in which none of the residue of a meal taken eight hours after defecation is excreted within forty hours. The condition can be recognized by feeding Charcoal Lozenges eight hours after defecation and observing when black stool appears. We owe

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a great deal to Hertz for the splendid work he has done in applying the X-ray and bismuth meal as a means by which the field of constipation may be localized. Observations are made at intervals during the next two or three days of the shadow produced on the fluorescent screen. The large intestine should be emptied by enema on the day previous to the examination. In this way it can be ascertained in which part of the bowel the delay occurs. In a normal individual the bismuth shadow is seen at the cecum in four and one-half hours after the meal; the hepatic flexure is reached between five and eight hours after a meal; the splenic flexure between seven and fourteen hours, and the junction of the descending colon with the iliac colon, between eight and sixteen hours. The rate of progress through the iliac colon is about the same as that given, but that through the pelvic colon appears to be slower.

Hertz divides Chronic Constipation into two great classes: First—Detention of the contents of the bowel from the stomach to the pelvic colon. Second—Lack of proper ability to defecate or empty all below the pelvic colon. The first class may be caused by: (a) deficient motor activity; (b) obstruction. Deficient motor activity may be caused by poor muscle, due to senility, anemia, cachexia and constitutional conditions. As old age comes on, it is often found that severe constipation appears; yet any of these cases can be no doubt referred to other causes than senility, such as relaxed abdominal muscles in women who have borne children rapidly and often. Anemia, especially chlorosis, leaves the musculature of the body in a poor condition, thus predisposing to constipation. Yet it is possible that the low clotting power of the blood may have a share in it because of the amount of water taken up and lodged in the tissues of the body, thus producing inspissation. In that case this cause would come under the head of deficient water in the feces.

Cachexia, rickets and fevers will not be considered, as they act as causes of transient and not necessarily chronic constipation. Over-distension of the bowel from too great formation of gas which cannot escape easily, so weakens the musculature that it becomes a potent factor in reducing the motor activity, especially in people with weak abdominal muscles.

Obesity acts as a cause under this heading, because of the infiltration by fat of the muscle of the bowel.

Second.—Deficient motor activity is caused by functional or organic depression of the nervous system, as seen in neurasthenia, tabes and senility.

Lack of peristaltic stimulation acts as a cause of deficient motor activity, as is seen in people who eat too little food, or eat food which contains too little residue. This may also occur where absorption of food is unusually complete. Too little food may be taken by people suffering from painful gastric conditions, to avoid pain. This is also seen in constipation, which is almost ever present in neurasthenia, because the patient suffers from want of appetite; hence, not enough food.

Constipation is often one of the earliest symptoms of oncoming nerve breakdown, and in neurasthenia one often sees depression on days in which bowels are forced to act. This, no doubt, is due to the drain on their nerve supply which it takes to keep tone in the splanchnics. We must never forget that for every contraction of the muscle there is also an adequate expenditure of nerve energy.

This nerve failure will also be behind many of the cases of disturbance of secretion, absorption and exertion, associated as they are with flatulence, pain and muscular cramp. Food with too little chemical excitants acts as a cause.

Vegetables and fruit contain chemical substances which stimulate the bowel. These articles may however be guilty of producing constipation as well as looseness, according to the temper of the colon.

All of us have met cases where the patient suffered from some form of indigestion which he imagined could be cured by eating less. This being done, he found chronic constipation develop, and the last state of that man was worse than the first.

Also, the food of the well-to-do is often so refined and concentrated that their stomach would have to be very large to hold enough to produce one good stool after the process of digestion and absorption has been completed. This is a very potent factor and a very widespread cause. One can easily see how such diet is apt to form a vicious circle by overloading the liver, or the chemical laboratory of the body, and that organ

being unable to thoroughly elaborate its secretions, these in turn affect the body generally.

Another cause of deficient motor activity is sympathetic stimulation, which inhibits peristalsis. The musculature of the intestine gets its motor supply from the vagus and its inhibition from the splanchnics. Anything which stimulates the solar plexus would produce inhibition of the intestine. The chief offender is pain in any of the organs of the abdomen, prolonged, for example, chronic appendicitis, painful ovary or tube, painful floating kidney, and lead poisoning. Lead acts by stimulating the sympathetic nerves, as is seen in the concomitant rise of blood pressure, thus inhibiting the bowel. If the vagus nerve is irritated by it, it produces colic by spasmodic contractions.

Paralysis of the splanchnic nerves by lead poisoning gives irregular peristalsis, thus causing chronic constipation.

The other cause of slow passage of feces along the intestine is obstruction. This may be due to spastic contraction often following prolonged suffering from colitis, and to hard feces, which may have many causes, for example, diabetes, excessive secretion of sweat, too small amount of water taken in, water replaced by alcohol, fibrous or malignant stricture of the pylorus, increased absorption from the colon.

In diabetes, as in excessive sweating, the water exit of the body is via the kidney and the skin; the bowel does not get its share of fluid, hence the cause of inspissated feces.

If the amount of water taken is small, we get the same results as from fibrous stricture of the pylorus, as this prevents water from passing on down out of the stomach, no water being absorbed from the stomach wall.

Goodhart, in 1902, found the absorption index greater in chronic constipation than in normal colon. In a given time the colon of a person suffering from constipation would absorb more saline solution than would a normal one. It was also observed there is such a thing as a greedy colon, as less nitrogen, fat and cellulose is found in feces of a constipated person than in that of a normal one. This shows that in some cases chronic constipation may be produced, or kept up by too rapid absorption of intestinal contents. Kinking of the bowel has been regarded as a cause of chronic constipation, associated with visceroptosis

and peritoneal adhesions. Hertz has shown, by his X-ray experiments, that the constipation is not due to the kinking of the intestine but to weakened abdominal muscles, so ever present in these cases. This acts in two ways: First, by not having muscles sufficiently strong to start the act of defecation. But these same weak muscles allow over-distension of the bowel by gas, thus weakening the viscus. This produces two causes of constipation, namely, slow passage of contents along the bowel and difficulty of getting rid of it when it reaches the pelvic colon. This weakening of the abdominal muscles causes visceroptosis, and this produces kinking, particularly at the hepatic and splenic flexures of the colon, and at the junction of the duodenum and jejunum.

The nervous bankruptcy, which is ever present in cases of enteroptosis, and so often described as a result, may, in my opinion, often act as a cause. No muscle of the body can retain its tone or staying powers if the nerve capital of the individual is below normal. The early fatigue on exertion seen in these patients is evidence of the lack of nerve tone in the muscles, and no muscles are more prone to relax than those of the abdomen, thus lack of nerve tone may produce enteroptosis.

As for peritoneal adhesions being such a potent cause of constipation, one might say that Mollisin and Cameron, in fifty consecutive autopsies at Guy's Hospital, the ages running from three weeks to sixty-eight years, found adhesions in every adult and older child, and in eleven of seventeen under five, Virchow states that he had difficulty in finding a body of an adult free from intestinal adhesions, even in people who did not suffer from constipation.

Arbuthnot Lane, however, considers these adhesions and bands as the cause of many cases of chronic constipation. On this belief he has perfected his operation for short-circuiting the intestine and doing away with the function of the colon. However, such a thing as a loaded cecum is rarely ever seen after death.

Perhaps the greatest number of cases of chronic constipation is caused by trouble in the descending and ileopelvic colon. Hertz has found, by X-ray examination, the passage of the feces has been normally rapid down to the descending colon, but that

after that the delay occurred. This delay allows inspissation to go on, with the result that the contents are made harder still to evacuate. One may have daily evacuations, under these circumstances, of small quantities, and still leave a large amount behind, which, in time, may even become tunnelled. If this progresses, which it is bound to do, a state of affairs arises which prevents the bowel being emptied except by the aid of mechanical interference. In this form of constipation one finds more or less feces in the rectum on examination, even after evacuation. The causes of this form of constipation are:

1. Loss of reflex.
2. Dilated rectum and sigmoid, due to atony.
3. Atony or paralysis of the voluntary muscles concerned.

Loss of reflex and dilatation are both produced by a very common mistake that most people make, namely, disregarding nature's call to defecation. When the feces enter the rectum it produces an uncomfortable feeling, which shows that the bowel is ready to be relieved of its load. Laziness, pressure of other things, false modesty, lack of opportunity to attend to the call, fear of pain from hemorrhoids or fissure, are responsible for the procrastination. If the desire to defecate is resisted, the feces remain in the rectum and do not pass back into the pelvic colon, but remain packed where they are, thus blunting the sensibility of the bowel and keeping it dilated. Each subsequent call tends to get weaker, if disregarded, until the person can go around with the rectum loaded for even days without the desire to defecate returning. The next evacuation is sure to be incomplete, as the constant distension weakens the muscles of the bowel until they become so atonic that the case at length passes into the incurable stage.

People forget that the bowel can be trained very easily to certain habits of regularity, and if it is allowed to carry out its function, will do so without any trouble. They pay no attention to nature's call until they realize when the day is nearly ended that they have not had an evacuation. They then hasten to the pill box to help them out. The fact that they find temporary relief from the pill makes them more careless regarding nature's call, and it is more than ever neglected. Water closets being cold in many country houses also tends to make people put off the call.

Defecation is also put off by some on account of the pain produced by it. This may be caused by a tender ovary, a tender floating kidney, tender displaced uterus, hemorrhoids or fissures, or anal ulcers. These causes also have the effect of stimulating the splanchnic nerves, thus inhibiting the peristalsis of the bowel.

Weakness of the abdominal muscles, due to several causes, is a potent factor in causing chronic constipation. It is by the voluntary use of them that the act is begun, and without them it could not be completed. There is recorded the case of a child being born without any rectum muscles, and he was able to defecate, but compensation had taken place, and the muscles of the bowel were unusually pronounced. However, in normal individuals it is necessary to have the abdominal muscles in good condition to keep defecation normal.

Obese people who lead a sedentary life are very prone to suffer from chronic constipation, not always on account of the abdominal muscles being weak, but because of the fatty infiltration in muscles of the bowel causing slow passage of feces along the bowel.

In women we often find these muscles almost ruined by repeated pregnancies or large tumors, not only those of the anterior abdominal wall, but also those of the floor of the pelvis.

If the anterior abdominal muscles are weak and do not support the contents of abdomen, the diaphragm is apt to be more or less, if a position of inspissation, along with weakened pelvic floor, we have a bad combination for raising intra-abdominal pressure, a most necessary factor to the success of defecation.

Constipation found in cases of enteroptosis is no doubt due to this condition more than to any kinking at the hepatic or splenic flexures. If these flexures were obstructions we would have more histories of colic.

The muscles of the pelvic floor, which practically mean the levatories ani, are often injured by prolonged stretching in parturition. This may be so severe as to prevent their ever afterwards becoming normal. When this is associated with weak abdominal muscles, as is so often seen, it produces a very severe form of constipation.

Anything that effects the relaxation of the diaphragm also

tends to produce constipation. For example, emphysema causes it to be permanently depressed, and in asthma we have the same condition temporarily.

Spasm of the sphincter ani is a trouble that is more common than is generally accepted. It is caused by anal ulcer, hemorrhoids, fissure, and as a result of neurasthenia. I have observed a large proportion of these latter cases, and it is benefited by stretching. Hard accumulation of fecal matter will produce spasm of sphincter.

THE CAUSATION OF BRONCHIAL BREATHING IN DISEASE*

By G. S. Young, M.D., Toronto.

It is remarkable that after nearly one hundred years of auscultation there is no unanimity of opinion as to the origin of the various respiratory murmurs. Experience has taught us the exact significance of vesicular and bronchial breathing, but no one has yet demonstrated beyond question just how they are produced. The relationship of the respiratory sounds is so close that a few words may be said about vesicular breathing without exceeding the limits of the paper. There are two views as to its production—both supported by equally good authority:

1. That it is merely the laryngeal sound,† modified in its transmission through the bronchi and lung tissue.

2. That it is produced locally by the rush of air into the alveoli, or more likely by vibrations caused by the sudden tension of the expanding air cells.

The following may be cited in favor of the local or alveolar theory:

1. Some weeks ago, at the Toronto General Hospital, there was a patient with congenital absence of cartilages and ribs over part of the left lung. During respiration there was little movement of this area except for some indrawing in strong inspiration. But, by holding his breath and straining, the man could produce a hernia of the lung. During this act, which really meant inflation of pulmonary tissue by increasing intrathoracic pressure, a distinct vesicular sound could be heard over the hernia.

2. The same mechanical principles are involved in the following experiment on the normal subject: At the end of a rather shallow expiration, the breath is held and the abdomen, with the lower ribs, is strongly retracted. The diaphragm is thus driven

*Read at the meeting of the Ontario Medical Association, Niagara Falls, Ontario, May, 1911.

†For the purposes of this paper, the noise heard during respiration, when the stethoscope is placed over the larynx or trachea, will be termed the Laryngeal Sound.

up, forcing air from the lower parts of the lungs toward the apices. The experiment requires some practice, but if properly performed a vesicular sound can be heard over the upper parts of the lungs.

In both of these cases the holding of the breath excludes the laryngeal sound as a factor. In the latter experiment there is some danger of being misled by muscle sounds, but, with every care to eliminate these, there is still a murmur of distinctly vesicular character.

In the case of bronchial breathing as found in disease, theories of "local causation" have not had much support. Bronchial breathing, according to Laennec, the inventor of the stethoscope and the father of auscultation, is simply the laryngeal sound transmitted to the surface by a lesion which is a better conductor than normal lung tissue. With some modification of detail this view has received general acceptation.

Skoda raised the objection that consolidated lung is not as good a conductor as healthy pulmonary tissue. Certainly, if a section of hepatized lung be laid over a watch, and a stethoscope applied, the sound is not heard as distinctly as when a section of normal lung tissue is substituted. But the conditions are altogether different in vivo. In health, the laryngeal sound is carried by the air columns in the bronchi for a short distance, then dissipated in every direction by innumerable air cells. In consolidation, the vibrations are confined by bronchi, which are closed and made more or less rigid by condensed lung tissue, so that the general effect is to produce a sound-conducting medium. Further, the fact that the vibrations of vocal fremitus (the origin of which must be laryngeal) are intensified over consolidation seems to be proof positive of increased conduction.

There are, however, some objections to the laryngeal theory of bronchial breathing, which are not so easily met. How does it happen that the bronchial murmur can be heard occasionally beyond the area of consolidation, or even on the opposite side, over healthy lung, as shown afterwards by autopsy? Or again, why does bronchial breathing over pneumonic areas so seldom resemble the laryngeal sound except in duration and intensity? The quality and pitch as a rule are quite different. It would seem that there must be something more than increased conduc-

tivity—a local intensification, if not a local production, of sound.

These objections are avoided to some extent by Skoda's theory. It is based on the interesting phenomenon of resonance (or, to use Skoda's term, consonance). If a tuning-fork is struck and then held over an empty jar, the sound will be greatly intensified, provided that the length of the air column in the jar bears a definite relation to the vibration rate of the tuning-fork. Or, to give a medical flavor to the subject, if the bell of a stethoscope is replaced by a brass cylinder, and the latter is held near a piano, certain notes struck will sound very much louder than others, depending on the length of the cylinder. Skoda held that in consolidated areas the bronchial tubes are converted into firm-walled resonating chambers, and that the contained air columns resound to certain elements of the laryngeal noise, and thus intensify them.

It will be noticed that the Laennec theory of "increased conductivity" and the Skodaic theory of "local intensification through resonance" agree in one particular, viz., that the initial cause of bronchial breathing in disease is the vibration at the constriction of the glottis. There is, however, another possible explanation, suggested by Sahli and Gee, which does not take into account the laryngeal sound at all.

As soon as a portion of lung becomes completely consolidated, the bronchial tubes supplying that part are put out of commission. Air no longer passes through them. They contain almost stationary air columns. The result is that air going to and from adjacent healthy lung passes, *not through,* but over the mouths of these affected tubes. The air current will be stronger than usual on account of the surrounding compensatory emphysema, and more rapid. Now, if one blows however gently across the open end of a thermometer case, or even over the mouth of a rubber tube, a sound is produced. It is more distinct if the air current is concentrated by blowing through one tube across the mouth of another. These are precisely the conditions that exist in the case of consolidation. Bronchial breathing has frequently just the peculiarities that one would expect from such an arrangement of air current and tubes. It is frequently of a blowing or whiffing character.

While it is not a musical note nor a combination of tones any more than the noise produced by blowing gently across the mouth of a tube, still it has pitch. Whether it is high or low will depend on the length of tube and branches involved in the consolidation. If the area is great, a large bronchus with all its branches may be entirely out of commission, and a low-pitched sound will result. If the consolidation is slight, the smaller and shorter tubes alone are stopped, and the pitch is likely to be high, with perhaps a suggestion of hissing.

It must be said that experiments with several pathological specimens from animals have not given clear proof of the correctness of this theory. Inflation of a lung containing a consolidation sometimes, but not always, gives a blowing sound over the diseased area. Experiment is complicated by rales and by the difficulty of eliminating sounds produced by the inflating apparatus. In conclusion it seems clear that bronchial breathing is not due to one factor alone, but to at least two, either of which may predominate in different conditions, giving rise to sounds varying in quality and pitch. If the condensed lung tissue is slight and irregular, and does not stop the tubes to any extent, conductivity will be increased sufficiently to bring out bronchial breathing of the laryngeal type. If the consolidation is due to lobar pneumonia, for instance, air will cease to pass through the tubes supplying the affected portion. An unusually rapid stream of air will blow across their openings, and bronchial breathing of altogether different quality from that of the laryngeal sound will be heard. It will be noticed that if this view is correct, Skoda's explanation of the occurrence of resonance from the laryngeal murmur is untenable.

TWO CASES OF PHLEGMONOUS ENTERITIS*

By L. W. Cockburn, M.D., Hamilton.

Moynihan has well said that there is no greater surgical emergency than acute intestinal obstruction, and as acute obstruction was the leading symptom in these cases, and further, as intestinal adynamia as a cause of acute obstruction is not even mentioned by many authorities, I felt that these should be reported. I have named them Phlegmonous Enteritis, but the disease is said to be so rare, and literature bearing on it is so meagre, that I feel that my diagnosis may be called in question. In answer to this possible contention, I can only say that what I found tallied exactly with McCallum's description, as revealed at autopsy. (See C. W. G. McCallum, Johns Hopkins, bulletin, 1906, which was practically the only literature I could find bearing on the subject). Rolleston, in an article in Clifford Allbutt's system, suggests that, though supposedly rare, the disease may really be more frequent than the profession imagines. I think this may be true. On opening the abdomen in Case 1, I was entirely nonplussed by what I found, as I had never seen, heard or read of any condition resembling the appearances revealed on opening the abdomen of this patient, and the credit for suggesting what the case was belongs to my friend, Dr. Ingersoll Olmsted, to whom I was narrating the case, and who suggested it was a case of Phlegmonous Enteritis, referring me to Dr. McCallum's article.

Case 1.—H. H. B., age about 25, seen on the evening of November 21, 1909, with Dr. Davey, of Hamilton. The man presented the ordinary picture of acute intestinal obstruction. General condition good. In December, 1906, I had seen this man in consultation with another physician, under whose care he then was, and had removed his appendix, and both Dr. Davey and myself were inclined to think this attack might be due to some band or kinking of the bowels, the offspring of his former operation. The man was removed to the General Hospital late that night, and I operated the following day, Dr. Davey assisting, and Dr. Gillrie administering the anesthetic. On opening

*Read at the meeting of the Ontario Medical Association, Niagara Falls, Ontario, May, 1911.

the abdomen, I saw what I had never seen before, and what at the time completely nonplussed me. Between two and three feet of the ileum, some three feet distant from the ileo-cecal valve, was distended rigid stiff, and thickly covered all over with purple patches, which were a good deal thicker than the surrounding thickened bowel These patches varied in diameter from one to four centimetres. The areas of gut between the patches being thickened and stiff. The peritoneal surface was everywhere smooth and glistening. I noticed that the diseased gut was not as distended as the healthy gut above it. It seemed as if the bowel was too stiff to stretch much. The transition from healthy to diseased bowel was singularly abrupt and sudden. The bowel above the diseased section was greatly distended. The ileum between the lowest purple patch and the ileo-cecal was normal, as was also the large bowel. No band, narrowing, constriction, kinking or twisting of any kind could be found, and it was perfectly evident that the diseased section of the bowel was the cause of obstruction. That it was, in short, a typical case of adynamic obstruction, the first I have seen. The diseased bowel was isolated by pads in the usual way, was then incised, and Moynihan's medium-sized glass tube was used to empty the loaded intestine. I opened the bowel in instead of above the diseased section. After passing the tube into the bowel, I found great difficulty in folding the intestine on it. The tube was fully eight inches long below the second flange, and the folds of bowel looked like rolls of felt on the tube, so thick and stiff were they. With some difficulty I got the whole of the distended bowel thoroughly emptied. I then did an enterostomy in the centre of the abdominal incision, lock-stitching the incision in the bowel to the parietal peritoneum, and closing the rest of the wound above and below. Part of my incision in the bowel went through one of the thickened patches, and this part seemed more friable than the rest of the bowel. I put very little tension on my stitches. We expected the man to die, but he didn't. At first everything came through the fistula; but it gradually contracted, and the bowels began to move naturally. The fistula healed soundly, the patient has no hernia, and is now in good health. I quite expected to have to resect the bowel to close the fistula, but it was not necessary.

Case 2.—Mrs. R., aged 67; seen with Dr. Park, of Marshville, on the night of December 8th, 1910. This lady was taken ill on December 3rd with nausea, abdominal distress and commencing distension, which, however, affected only certain coils of intestine. Distension increased; constipation absolute; and on December 6th vomiting became stercoraceous. (Dr. Park's notes.)

When I saw this lady on December 8th she presented all the symptoms of acute intestinal obstruction. Operation at once, Dr. Park assisting, and Dr. Howell, of Welland, giving the anesthetic. A small swelling over the right femoral ring was first cut down on, and was found to be an epiplocele; no constriction, and the femoral ring was quite free. The abdomen was then opened in the middle line, and the same condition was found as in Case 1, but very much less marked, the bowel appearing injected and somewhat distended. The purple patches were not so thick and leathery, and the bowel between the patches, though obviously thicker than normal, had not the stiff and rigid feel so striking in Case 1. Most careful search was made for any form of constriction or other mechanical obstruction, but no trace of any such condition was found. Here, I thought, was another case of adynamic obstruction.

I hesitated for a few moments as to what was best to do—an enterostomy or to close the abdomen. I closed the abdomen, for several reasons. I was operating in a farm house, away in the country, in the dead of night, with defective light and imperfect technique. The distension was slight, compared with Case 1, and the general appearance of the bowel led me to think it might functionate if returned. Since operating on Case 1 I had of course looked up the subject. W. G. McCallum, in the *Johns Hopkins Bulletin* for August, 1906, describes the condition as found at autopsy. If it is due, as suggested, to infection, the thought occurred to me, while debating within myself what best to do in this case: Infection may be very severe or very slight; assume this case to be slight, might not handling the bowel relieve the stasis, thereby starting peristalsis, and thus enable the bowel to resume its duty? Reasoning along these lines, I decided to close the abdomen. The patient made a good recovery.

Comment.—I thought long over these two cases. My experience of intestinal obstruction is not large. During a professional career extending over a quarter of a century I have operated on about thirty cases of acute intestinal obstruction, exeluding, of course, cases of ordinary strangulated hernia. Looking backwards, I can recall at least two cases in which I have opened abdomens in the presence of symptoms of acute obstruction, found nothing, closed up, and the bowels moved. Could these have been cases of commencing phlegmon caught just as the infection of the wall of the gut was stopping peristalsis?

Society Proceedings

ACADEMY OF MEDICINE, TORONTO

The first Stated Meeting of the Academy of Medicine for the current winter took place in the new Academy Building, No. 13 Queen's Park, on Wednesday evening, October 4th. President Dr. N. A. Powell occupied the chair with the Hon. Secretary, Dr. Harley Smith, at his right. The opening meeting was quite a success, the attendance being most gratifying.

Before delivering his inaugural address, the President asked Mr. Hazen, the New York Water Expert, to say a few words to the academy in reference to the present condition of Toronto's water supply. Mr. Hazen was good enough to address the fellows for a few minutes, and assured them that the filtration beds at the Island were rapidly approaching completion, and that they would be ready for operation just as soon as the electric power, necessary for the working of the pumps, was installed. Mr. Hazen assured the audience that the medical profession of Toronto might look forward to the water for Toronto being of the very best quality, though he urged that some steps should be taken to stop the tremendous waste that is now going on. Mr. Hazen thought that the only way this could be done would be to place a meter in every house; otherwise, he added, it would be necessary before many years to double the number of filtration beds now in existence.

The President then delivered his inaugural address, and which we reproduce in this issue. Dr. Powell is to be congratulated upon his efforts, his address being masterly, thoroughly practical and at the same time witty.

The Vice-President, Dr. R. A. Reeve, occupied the chair during the President's address, fulfilling his duties in his usual able manner. Dr. Geo. W. Ross introduced, seconded by Dr. H. J. Hamilton, that the Council of the Academy of Medicine should be requested to take some action in reference to inducing the

Provincial Government to enforce in lumber camps the use of anti-typhoid serum, in that manner almost abolishing the prevalence of this disease where men of foreign birth are crowded together under more or less unsanitary conditions. Dr. McCullough, Secretary of the Provincial Board of Health, spoke to the resolution and assured the Academy that he would do all in his power along this line. Dr. Alexander McPhedran urged that it was really more important that the Government take steps to supply lumber camps with pure water, by that means preventing the disease rather than curing it.

The Section of Pediatrics convened on October 5th in the Hospital for Sick Children, under Chairman, Dr. J. T. Fotheringham. Dr. Fotheringham delivered an admirable address on Primary Pyelitis in Infants, after which a number of most interesting clinical cases were reported and exhibited.

The Section of Medicine met on October 10th in the Academy Building. Drs. W. B. Thistle and Goldwin Howland exhibited some very interesting cases. The opening meeting of the Section of Medicine was a distinct success.

Dr. Graham Chambers delivered the Chairman's Address and spoke as follows:

Ladies and Gentlemen:

I thank you for the honor you have conferred upon me in electing me your presiding officer for the incoming year.

In casting about for a suitable subject for an opening address I came to the conclusion that a few suggestions on the management of our section would likely prove acceptable to you, even if my views should not be in harmony with those of some of the members. We are all proud of the Academy of Medicine, especially of our section, and anything which I shall say will be given in the light of suggestions and friendly criticism, with the hope that it will result in an improvement of the organization.

In the management of the section the question which especially concerns us is the determination of the method of conducting the meetings which will give the best results to the members. In previous years the meetings of the section were well attended, and the members present always evinced a keen

interest in the programmes, but we feel that with the large membership of the section, and the opportunities for clinical work of its members, much greater success should be obtained. The question is, How can this be brought about? The answer is, we think, by promoting good fellowship and by making our programmes more clinical in character.

The promotion of good comradeship is of first-rate importance. Indeed it might be called the main function of a medical society. Without an organization in the profession to bring the practitioners together there is generally wretched discord, absence of any unity of purpose, and as far as my observation goes a low standard of medical education. Under such conditions the establishment of a medical society rarely fails to promote harmony and to show the practitioners that co-operation is to the advantage of all. In our city of Toronto the various meetings of the academy have done much to develop a better feeling among the medical men, but I feel that there is still room for improvement. I am not quite sure whether our atmosphere should be called discordant or harmonious, but I believe that there is not the good fellowship that should exist in a community with all the advantages which we enjoy. It is well, I think, to call attention to this, as it may stimulate the members to do something to improve conditions in this regard. My remedy is that we should meet more frequently, and that part of each meeting be given over to some form of social gathering. I would also prescribe an annual dinner, a function which rarely fails to promote harmony among the diners.

Another suggestion which we have to make is that the programmes be made essentially clinical. An ideal programme would be the exhibition or report of five or six clinical cases, followed by a short paper on some observation in practice. If the exhibit or communication be provocative of discussion, the result would be all the better during the incoming year. We think that symposia or long papers on the general pathology, symptomatology, or treatment of well-known diseases, should be eliminated from our programmes, for the reason that the information contained in the papers can usually be obtained from an up-to-date book on the subjects in our library. On the other hand, we are looking for short papers on observations in prac-

tice, which I am sure will be forthcoming if the members of the section consult their own interests as well as that of the academy, because if the observation be correct clinically, much credit comes to the observer and the academy, and if incorrect very little discredit. Moreover, a discussion before the academy, and the clinical experience of the members, will do much to determine the accuracy of the observation. This is one of the functions of the academy. Every member has the advantage of his fellow members in solving his problems, and it is his duty to accept their aid.

Our decisions to make our programmes clinical in character should not be interpreted as indicating that we deprecate the educational value of symposia and papers on the theory of medicine, but that we appreciate the value of clinical work more. If the section met more frequently, which I think would be to our advantage, the programmes could be arranged to include both.

The disposal of the papers and reports, presented to the section is a point in the management that requires attention. In the past, the members of the academy, not especially of this section, have been somewhat derelict in this regard. We hope, however, that something may soon be done in publishing the contributions or at least in collecting reprints of the publications. Possibly the committee on publication will be able to solve this problem to our satisfaction.

The Section of Surgery convened on October 17th, presided over by the Chairman, Dr. Herbert Bruce. Dr. Bruce announced that it was his intention to make the meetings of his section this winter as nearly as possibly clinical in character. At the opening meeting Clinical Cases and Case Reports were presented by Drs. Alexander Primrose, W. McKeown, F. N. G. Starr, Stanley Ryerson and J. Roberts.

The formal opening of the Academy of Medicine at No. 13 Queen's Park took place on Thursday last, the 26th of October, and this we hope to report at some length in our next issue.

Selected Articles

A NOTE CONCERNING THE TREATMENT OF TUBERCULOSIS BY "RADIO-ACTIVE IODINE AND MENTHOL"

BY LEONARD ROBINSON, M.D. EDIN. AND PARIS.
Physician to the Hertford British Hospital Paris.

At the last Hungarian National Medical Congress Professor Szendeffy laid before his colleagues the results he had obtained during the two preceding years with a new chemical body with a basis of iodine and radium. He cited a large number of facts tending to prove that it was possible with this chemical product to arrest *in vitro* the development of the most virulent cultures of the bacillus of Koch, and also to stop the progress of tubercle in animals which had been experimentally inoculated with the bacillus.

Professor Szendeffy and Dr. Kertez-Aba, Physician to the Austro-Hungarian Court, together communicated a large number of clinical observations which proved that the hypodermic injection of radio-active iodine and menthol was well tolerated by patients, and also that this compound had a very powerful phagocytic action in patients with tubercle who improved under treatment and made progress towards recovery. Wishing to have his statements controlled by an independent expert, Professor Szendeffy asked the help of Dr. S. Bernheim, of Paris, President of the Oeuvre de la Tuberculose Humaine, who had a vast field for testing the new treatment among the numbers of patients who attended the various dispensaries and sanatoriums supported by this charity. During the last twelve months Dr. Bernheim, with the help of Drs. Dieupart, Hervé, Diamantberger, Michalovici, Baud and others, has applied the treatment to a large number of patients, and clinical reports of the cases were recently communicated to the Société Internationale de la Tuberculose, the French Clinical Society, and other scientific bodies.

In the opinion of Dr. Bernheim, the action of this chemical product invented by Professor Szendeffy is due more especially, and almost exclusively, to the volatility of radium, which is eliminated slowly by the lungs. Dr. Bernheim believes that there is a true selective action, a fixing of helium at the site of the tubercles in the lung, and considers it not astonishing that this radio-activity should neutralize the harmful action of the bacilli of Koch and of the associated microbes. According to Dr. Bernheim, this radio-activity also paralyses the harmful influence of the toxins. Considering the rapidity with which Koch's bacilli are destroyed by the sun's rays, and also how easily the development of bacilli is arrested when in contact with radium, a comparison between these two physical phenomena is justifiable.

Dr. Bernheim described to me the three following recent cases, which have a great clinical importance and interest:

CASE I.

A lady in society, aged 24 years, tuberculous herself and having tuberculous parents, during her five years of married life had had three miscarriages. Pregnant for the fourth time, and being in the fifth month of pregnancy, she was given injections of radio-active iodine and menthol, and received two series of injections (eighty in all). Her condition improved, and she was able to carry to term, and was confined of a living child, weighing 3 kilos.

CASE II.

A similar case in a woman of the working classes, aged 44 years, tuberculous, a patient at the Dispensaire Antituberculeux at St. Denis, who had had seven miscarriages, and who had contracted tubercle from her husband. She was treated by injections of radio-active iodine and menthol from the beginning of the third month of pregnancy. It proceeded to term; and she was confined of a living child.

CASE III.

Dr. Dieupart recently treated a patient sent to him by a *dispensaire antituberculeux*, who had phthisis with bacilli in the sputum, and also tuberculous disease of the left wrist, which had prevented any use of the joint for several months. After twelve injections the swelling of the radio-carpal joint completely dis-

appeared, and the patient recovered all the normal movements at the wrist-joint.

The authors, in their original communication, came to the following therapeutic conclusions:

1. That "radio-active iodine and menthol" destroys the bacillus of Koch. In all the cases in which the sputum has been systematically examined microscopically before and after the injections, it was found, first, that the bacillus took the stains less well, that it was in a degenerating condition, and that it became rarefied, and finally disappeared.

2. That radio-active iodine and menthol has a powerful action on streptococci. In tubercle, the existence of a mixed infection implies generally a bad prognosis: streptococci and staphylococci seem to increase the toxic secretion of the bacillus of Koch. Radio-active iodine with menthol destroyed streptococci very rapidly. In two grave cases of sore throat with streptococci Dr. Kaminski found on the third day that the throats were cured, and that no streptococci were present. Dr. Bernheim has noticed that after the injections the streptococci, which were numerous in the sputum in some cases of phthisis, diminished in numbers, and eventually disappeared.

3. That radio-active iodine and menthol improved the general condition of the patients. In these conditions the destruction or attenuation of the bacilli, *ipso facto*, brought about the disappearance from the organism of the toxins secreted by them. Every patient—even hopeless cases—felt a great improvement in his general condition. He found that patients who were exhausted and could no longer walk, were, after treatment, able to walk without fatigue; hopeless cases, which could not be cured, could take walks; those with intense dyspnea were again able to breathe freely. Many patients had returned to work, feeling stronger and more cheerful.

4. That this product seems to possess a dynamogenic action. The radio-active emanation appeared to be manifested in the patients by facts that could be, so to speak, mathematically proved. They were imbued with a feeling of strength and renewed life. This increased strength was remarked in practically all the cases. Neither menthol nor iodine could cause this, and it

could only be explained by the emanati
chloride, which thus confirmed the opi.
ham and Degrais.

5. That this product caused an incre
crease, which was observed in every case, wa
increased a pound a week; others who can
their sputum teeming with bacilli, put on wei
way; even patients with cavities, and in whom
fatal, also increased in weight.

6. That the beneficial effect of the product
of intercurrent affections. Some of the patien
or dry pleurisy, and had to stay in bed and stc
for several days; these acute attacks were mild an
tion; there was simply an interruption in the ra
ment, without any aggravation of the local or ge

7. That radio-active iodine and menthol cu
glands. Several cases were quoted in support of

8. That the treatment had an action on tu
gitis. The authors quoted two cases in which
was manifest; at the beginning of the treatm
weak, raucous, and broken; gradually after
normal timbre of the voice returned.

9. That the product acted locally on
diminished the quantity of sputum, suppre
caused the fever and night sweats to disappe

10. That the treatment made the gastric
lar. In many of the cases bad appetite h
long period; there were some cases with oc
absolute intolerance on the part of the sto
could not be treated by hyper-alimenta
active treatment the appetite always ret

The experiments with radio-active ic
of recent date, as some writers have sta
on for more than three years. This c
experiments, has been applied, followe
number of independent medical men, v
sanatoriums, dispensaries, and hospita
proved, so that it is impossible to doub

ompound is given as follows:

..... 0.75 gr.
..... 0.06 gr.
hloride.
drop of ether solution.

put up in sterilized tubes of 1 c.cm. each,
Bernheim by intramuscular injection in the
e injections are given in series of forty—one
e days for five or six injections, to test the
the patient, and then one every day till thirty
then one injection every other day. After ten
iew series of forty injections is given.
g tried in numbers of the hospitals in Paris and
his is doubtless but the beginning of fresh re-
activity, analogous to those already carried out
the Paris hospitals, and by Drs. Wickham and
dium Institute. It is almost certain that this
nproved, the doses of radium injected being
n prudence increased, but the profession will
the results already obtained from scientific
observation.—*British Medical Journal.*

XPERIENCE WITH FIBROLYSIN

triking cures have been achieved in the
n's contraction, which has been revolu-
ion of Fibrolysin. A host of quotations
ove that surgical interference will no
this distressing deformity. The tight,
palmar fascia are just those morbid
ysin exerts its specific solvent action.
to record series of successful cases.
led in the treatment by massage, hot-
al measures, but it is the action of
contractions which is mainly respon-
nefit conferred.
ellani has been led to try the effect
ve for elephantiasis. This disease is

due to hypertrophy of the subcutan
fibrous tissue in various stages of de
treatment show that the affected parts
size, the skin softer and more elastic an
in folds.

Dr. J. Plesch[1] describes two cases of
tion, which he treated at the same time:—

On alternate days he gave injections of 2
and hand baths of hot salt were taken dail
assisted by manipulating the fingers and by
felt distinctly better after the fifth injection
both hands could be straightened out, witho
passive motion. A perfect cure resulted after
jections. He was able to move his fingers freel
remained a somewhat contracted position of th
digits to testify to the previous deformity. E
the last injection the patient reported himsel
with complete digital movements, and with his
nothing had ever ailed it.

The author concludes from his observatio
tion of the palmar fascia is due both to ne
mechanical irritation, and that both these
sidered in treatment. If it were due sole
lesion, indicating some central disturbanc
be anticipated without attacking the unde
ever, the contracture is a local disease
loosening of this contracture should cure
therefore, that Fibrolysin is only to be
nervous and atrophic causes can be ex
refers to the fact that hitherto the t
contraction has been exclusively opera
as Neutra, Jansen, Schaffer, Testi,
others, all agree that removal of the
is the proper treatment. The older
the tight bands is no longer looked

Dr. H. Koch[1] also describes a
which developed into a typical Dup

A municipal official, J. K., began
contraction of the fingers of the le

as due to the constant carrying, for
v bundles of legal documents. The
re, for the last two fingers were both
igle and their movements were exceed-
the patient found his hand practically
dons of both fingers stood out prominently
ids in the fibrous induration of the palmar
ient by means of Fibrolysin injections was
piest results followed. The injections were
of two to three days, and at first were ad-
neously in the left forearm. After four or
as possible to recognize a distinct softening of
cture. The subcutaneous injections into the
ful, and owing to irritation of the ulnar nerve,
of sensation occurred in the last three fingers,
r fourteen days. The subsequent injections
muscles of the back, alternately on the left
nese injections were quite painless, and were
ll effects. These injections, like those given
e sometimes at once followed by a slight
mouth. After twenty injections the useful-
was restored. The affected fingers can now
cessation of the treatment—be completely
trouble. The flexion is excellent, and the
s become quite powerful.

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ut. Wochenschrift. No. 16, 1906.

Canadian Journa
and Sur

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S AMONG ITALIAN IMMIGRANTS IN AMERICA

l at the Milwaukee meeting of the c Health Association, last year, Dr. hief Medical Officer of the Depart- rior, Ottawa, quoted statements made Stella, of New York, respecting the losis among young Italian immi- ll k. It was claimed that these immi- New York in good health; but that, f life spent there, many of them nd died in New York or returned Italy. The chief reasons given akdown were: unsanitary hous- erwork and long hours in un- poor diet. In reference to the explained that it did not arise rought about by "An insane Italian immigrants to save

atistics showing that in 1890 ly 182,500 Italians, while in y of New York alone had of the total population in them being of the agricul-

To any physician, who has fo
velopments of medical science i
losis, it will not seem strange tl
agricultural classes should be free
at home and should develop some t
losis, when obliged to work long hou
factories and spend their nights in N
ment houses.

May not similar conditions of life
plain the high tuberculosis mortality.
the Irish in America? (See Osler's Pr
cine, p. 285.)

Italian immigrant girls, bred in tl
of Italy, find their way into Ameri
tories and sweat-shops, for the sa
animates their brothers when swir
American contractors—to make mc
nate than his sisters, the Italian
the open, does not lose his healtl
dollar-making. The wisest thing
has saved a little money, is to s
genial part of America, and res
brought up to do in Italy—vi
ing, etc. Now that wheat rai
come so profitable an ente
good thing for the health an
immigrants of both sexes, if
of Italians, were to organize
Alberta, Canada.

F MARSH FEVERS AT TORONTO

ion in his Practice of Medicine
n of the Great Lakes, malaria pre-
Lake Erie and Lake St. Clair reg-
ot have been accepted at Toronto or
r to 1871. Parkes (Manual of Hy-
Toronto, from observations made be-
ture of the British garrison in 1871:
nds on ground originally marshy. The
re built on limestone rocks of Silurian
nt fevers among the civil population;
aeent among the troops." The same
ll rks: "Formerly ague was prevalent
, especially in Kingston; it is now
ntreal, ague used to be seen; now
equent." No theory is offered by
he decrease in intermittent fevers
an towns. How malaria came to
onto and Kingston is also passed
e British system of garrisons
esponsible for its introduction.
occupied the marshes of the
o the establishment of a Brit-
ngle case of malaria arriving
subjected, during hot summer
Toronto mosquitoes would
arsh fever among the inhabi-
itish troops passed on regu-
arrisons to Canadian garri-

sons, prior to 1871, the introduction of malarial diseases from the West Indies to Canada was unwittingly provided for. It is also very probable that individuals infected with malaria, who entered Canadian civil society from the United States, or other foreign countries, assisted in the introduction of malaria here, as they also were exposed to the bites of the mosquitoes, which afterwards propagated malaria among the inhabitants.

Authorities give two ways of eradicating malaria from a locality: (1) To treat all individuals, so that the parasite of malaria will not enter individuals bitten by infected mosquitoes; (2) to protect individuals from the bites of mosquitoes by exterminating the insects. The first way, the medicinal one, was used, with more or less thoroughness, in Upper Canada, during the nineteenth century. The second plan, viz., drainage and sewerage, was primarily employed as a means of carrying off trade and domestic wastes; but in practice, by the added drainage of ponds and marshes, which formerly diversified the surfaces of Toronto and Kingston, it proved to be a thoroughgoing agency for the closing up of the breeding places of mosquitoes—an indirect method of exterminating these insects.

Personally, we know that, during the decade, 1870-80, people living in Toronto had malarial diseases and were treated for them. We also know that, during the past thirty years, malarial diseases at Toronto have become very rare. From the histories of cases recorded at the Toronto General Hospital,

we learn that, during the past six years, (1905-1911), there have been only seven cases of malaria admitted from Toronto, and, in nearly every instance, these seven cases of malaria admitted from Toronto were merely recrudescences of a malarial infection, which had been originally acquired at some other place, viz., Panama, Jacksonville, Florida, Kansas City, New Orleans. Malaria, arising from causes generated in Toronto, is now practically extinct. It did prevail here during the first half of the nineteenth century. The eradication of malaria here is due to the thorough drainage of ponds and marshes into city sewers and, especially, to the straightening of the Don, which provided for a continuous discharge of the waters of that river and the extinction of marshes in the valley of the Don. J. J. C.

DENTAL CARIES FROM A PUBLIC HEALTH STANDPOINT

THE discussion of dental caries from a public health standpoint, held at the seventy-ninth meeting of the British Medical Association, in Birmingham, was full of valuable and suggestive ideas. Dr. James Wheatley, who opened the discussion, held that "We have one outstanding fact to work upon—that caries is due to the retention of carbohydrate food in contact with the teeth. This condition occurs, when the lodgement of fermentable but non-detergent carbohydrates, in more or less immediate contact with the teeth, is undisturbed by the free access of saliva."

Whilst advocating the use of the toothbrush, as a matter of cleanliness and as an additional help in the prevention of caries, he does not regard it as an essential or effective method of prevention. He contends, that we must rely upon the character of the food and the way in which it is eaten. He is likewise of the opinion, that any attempt at prevention, by attacking the micro-organisms of caries by means of antiseptic mouth washes, is very unscientific and must be futile. Though it would be impossible to go back to the coarser foods of our ancestors, he holds, that our object should be to utilize our knowledge of the causation of dental caries, so that foods of the present day can be eaten with little or no risk. As a beginning, he has drawn up the following simple rules:

1. As soon as an infant needs food, other than milk, give it in a solid form requiring mastication, such as crusty bread, twice baked bread, or crisp toast. Never give bread soaked in milk, or flour added to milk, or other soft starchy foods.

2. As the child grows up, still give most of the food in a form compelling mastication. Food should rarely be taken in a liquid form, or soaked in liquid or minced. Bread should not be eaten new, and it should have plenty of good firm crust.

3. Drinking between each mouthful is very injurious. Liquids should be taken principally at the end of a meal.

4. Sweets should never be taken between meals, nor the last food in a meal, but only along with food requiring mastication.

5. A meal should always be finished with a cleansing food. It is very desirable that fresh fruit should be eaten freely, particularly at the end of a meal.

6. Mouth breathing in children should always be corrected, and, if obstinate, medical advice should be obtained.

Dr. Wheatley thinks that the application of these rules should be brought about among grown-up people, by the influence of the medical profession; the instruction of school children in oral hygiene should devolve on their teachers. Without being obliged to study the anatomy and structure of the teeth teachers should receive lectures showing how caries originates and how it can be prevented. They should also be provided with leaflets, containing the rules for the prevention of caries, to be distributed among the school children. The medical inspectors of schools should also take opportunities to instruct the teachers and the scholars, at their visits to the schools.

Of course, it may be said that until the efficient cause of dental caries is discovered, it will be difficult to decide on the value of preventive measures. Mr. Hopewell Smith, who also read a paper at the meeting "On the Abuse of Sweetmeats," thinks that sweetmeats should be rigidly tabooed by the young, and that parents should not allow their children to eat them. As the result of his own experiments to determine the origin of caries, he has proved "That superficial changes in the enamel leading to decalcification of that tissue can be set up by such sweetmeats as chocolate and ' caramel,' in the presence of

very acid saliva, from the mouth of an immune, as well as from the mouth of a non-immune." This last statement is a very important one, and Mr. Hopewell-Smith vouches for its correctness.

Still, it will be difficult, if not impossible, to wean the people from the use of sweetmeats. Besides, there is something to be said in favor of the physiological use of sugar as a stimulant. Only, in striving to lessen the incidence of dental caries, it would be well to remember Dr. Wheatley's rule, which says, that sweets should never be taken between meals, nor the last food in a meal, but only along with food requiring mastication. J. J. C.

PERSONALS

Dr. D. J. Gibb Wishart, represented the University of Toronto at the Third International Rhino-Laryngological Congress which met in Berlin, Germany, from the 30th Aug. to the 2nd Sept. Nearly 500 of the leading laryngologists of the world were in attendance. The proceedings were opened in person by the fourth son of the Emperor.

Mr. H. C. Tomlin, of Bathurst Street, spent a few days last month in New York, in reference to some further donations he is making to Toronto Western Hospital. As announced in our last issue, Mr. Tomlin presented the trustees of the hospital recently with a magnificent sterilizing plant, his generosity being greatly appreciated. His example is well worthy of imitation on the part of more of Toronto's wealthy merchants.

The Canadian Medical Exchange wishes us to suggest to physicians desiring to sell their practices that this time of year is probably the best of any for doing so, as they have a larger number of buyers registered with them than at any time of the year, asking them to pilot them on to something in the way of a desirable practice to satisfy their wants. A letter to Dr. W. E. Hamill, who conducts this exchange, Janes Building, corner King and Yonge Streets, will bring full information gratis.

Obituary

SUDDEN DEATH OF DR. CHARLES TROW

At his home, 43 Wellesley Street, Dr. Charles Trow, the well-known specialist, died suddenly at 7 o'clock on Sunday morning. October 8th, from angina pectoris, at the age of 55. Dr. Trow was a Professor of Eye and Ear on the staff of the University of Toronto and was also on the staff of the General Hospital and was Chairman of the Eye and Ear Department of the Academy of Medicine. The day before his death Dr. Trow, who was an enthusiastic golfer, was on the links of the Rosedale Golf Club, apparently in good health.

Dr. Trow was born fifty-five years ago in Stratford, and in 1885 graduated from the University of Toronto. After taking a post-graduate course in Europe he returned to Toronto where he practised for twenty-one years. He is survived by a widow, a sister, Mrs. (Dr.) B. E. Hawke, Wellesley Street, two brothers in Stratford and Mr. A. E. Trow, a brother residing in Toronto. The funeral was held on Tuesday, October 10th to Stratford. The Academy of Medicine sent a very handsome floral design and was represented at the funeral by Dr. A. A. Macdonald, ex-President, Dr. N. A. Powell, President, and Dr. R. A. Reeve, Vice-President. A large number of the city profession were also present.

News of the Month

TORONTO ORTHOPEDIC HOSPITAL CLINICS

This annual series of those clinics began on Saturday, Oct. 14th, 1911, and will continue for five months.

October—"Fractures." Chairman, A. H. Perfect.

November—"Diseases of Heart and Lungs." Chairman, F. S. Minns.

December—"Gynecology and Abdominal Surgery." Chairman, H. E. Clutterbuck.

January—"Diseases of Special Interest." Chairman, Jno. Stenhouse.

February—"Orthopedic Surgery." Chairman, W. S. Verrall.

October 14th—"Fractures at Hip-joint." Walter McKeown.

October 21st—"Fractures of the Lower Extremities with demonstrations of means for adjustment." B. E. McKenzie.

October 28th—"Fractures of Upper Extremities." A. H. Perfect.

These clinics begin at 4.30 p.m.

There will also be an Orthopedic Clinic each Saturday beginning at 3 p.m. open to graduates and senior students.

GOING TO CALIFORNIA

Dr. W. J. Hunter Emory, a senior surgeon on the staff of Grace Hospital, was entertained at dinner at the Toronto Club on Friday evening, October 6th, by the medical and surgical staff of the hospital on the eve of his departure for California, where he intends to reside and superintend his extensive fruit lands.

The chair was occupied by the Dean, Dr. B. L. Riordan, and Dr. R. A. Stevenson presented an illuminated address.

Some fifty members of the staff were present and among the guests were Mr. J. E. Atkinson, Inspector Dr. R. W. Bruce Smith, and Dr. C. J. Hastings, Medical Health Officer of the city of Toronto.

The speakers all laid particular stress on the need for greater hospital accommodation, especially for that class of patient who is willing to contribute a reasonable amount to the maintenance of the hospitals.

RIVER CREST SANITARIUM

The River Crest Sanitarium for mental and nervous diseases, alcoholic and drug habitues (including all forms of insanity and nervous diseases), is one of the most favorably known private retreats of this kind in the United States. In equipment and appointments, it is strictly first-class and modern. The medical and nursing staff are of the best. The physicians are men of the highest professional and thorough training in this country and in Europe. In addition to the up-to-date scientific methods employed, the staff is uniformly painstaking and conscientious in the management of every case. The grounds consist of a beautiful park of about thirty acres, commanding fine views of New York City, East River and Long Island Sound. There are nine separate buildings for patients, and special attention is paid to thorough classification of patients, this having been found so essential to the best results in treatment. The interior of the buildings, including furnishings, are bright and attractive and the whole appearance of the sanitarium is cheery and homelike, rather than institutional. All of the buildings have electric lighting and steam heat. The sanitarium has its own pure supply of water, its own electric light plant, its steam laundry, up-to-date horses and carriages and makes its own ice supply, together with one of the most complete power plants. Great importance is attached to amusements and diversion for the guests. There are complete bowling alleys, a golf course, lawn tennis, boating

and fishing, weekly dance and other entertainments, so essential as an important adjunct of treatment. The equipment and conditions of the institution in short, are perhaps as good as those offered by any similar institution anywhere, representing as they do a cost of about half a million dollars for the whole plant.

The rates are from fifteen dollars per week and upward, according to the room selected, the requirements of the case, etc. Dr. J. J. Kindred, the proprietor of River Crest, is also a member of the U. S. House of Representatives for New York State.

THE JACKSON HEALTH RESORT

The Jackson Health Resort at Dansville, N.Y., by its long years (53) of relation to invalids and the best up-to-date methods of giving them the advantages of institutional life, stands in reputation among the very first of the health resorts of this country. The situation of the institution, climatically and scenically, is wonderfully advantageous and beautiful. The dryness of the atmosphere and the mildness of its climate during the winter months give it a marked and approved position among all the institutions of the north in this country.

Materially, it is doing remarkable work with its splendid electrical equipment in the treatment of arterio-sclerosis and also those conditions of hypertension and disturbances of heart which belong to disturbed circulation through acquired debility of the circulation and the eliminatory organs by reason of overwork, over-feeding, lack of exercise and proper bathing, which in these latter days constitute the causes of hypertension of the circulation and kidney or heart diseases.

The family life of the institution, with its fine social quality and the many charming entertainments given for the benefit of the patients and guests, makes it unquestionably a delightful place in which to live for the period of recuperation and restoration.

Additions to Our Staff.—Commencing with the New Year, our readers will be glad to know that Dr. W. E. Gallie and Dr. A. C. Hendrick, of Toronto will be identified with our staff of collaborators. We welcome them in joining "The Four Hundred."

New York Skin and Cancer Hospital.—The Governors of the New York Skin and Cancer Hospital announce that Dr. L. Duncan Bulkley will give a thirteenth series of clinical lectures on Diseases of the Skin in the Out-Patient Hall of the hospital on Wednesday afternoons, from November 1st to December 20th, 1911, at 4.15 o'clock. The course will be free to the medical profession.

The Physician's Library

BOOK REVIEWS

Joint Tuberculosis. By LEONARD W. ELY, M.D., Attending Orthopedist to the Children's Hospital, Denver, Col.; Member of the American Orthopedic Association, etc. Publishers: William Wood & Co., New York.

The subject is sufficiently important to warrant the fuller discussion of the subject permitted by a monograph of 250 pages.

The author writes from a point of vantage, having had a personal experience in dealing with all aspects of the subject. Possibly the "practical" surgeon may hold that the author has occupied too large a portion of his book—nearly 40 pages—in presenting the pathology. A concise statement, however, of the author's views on the subject of the pathogenesis of bone tuberculosis may be found on pages 37 and 38.

It is in the chapters on Symptomology and Diagnosis that the author is at his best. They give a sane, concise and informing presentation of these important phases of his subject.

The reviewer's commendation cannot be so decided in considering the chapters devoted to Treatment. In the main the directions are excellent, but in such a monograph one looks for accuracy and for the latest best. That there is not always accuracy, witness the description of the Thomas knee brace (page 151), where it is said that the ring of the brace corresponds to a cross section of the upper part of the thigh. Hugh Owen Thomas himself was particular to direct that the angle made by the plane of the ring and the inner bar should be an angle of 155 degrees. Any other will be less than comfortable, and therefore unsuitable for the patient's use.

On the same page it is recommended that a plaster of Paris dressing be employed in the treatment of the later stages of tubercular disease of the knee. It is doubtful whether at any stage of the disease a tubercular joint should be confined in

plaster of Paris, thereby depriving the diseased area of the blood supply which nature considers necessary in order to carry out her plans of healing.

If the experience of the last decade has taught anything unequivocally concerning the treatment of tuberculosis, whether of bones or viscera, it has shown the undisputed place held, not only by fresh air and out of door life, but by long continued direct exposure to the sun's rays, the affected parts being absolutely uncovered. This latter phase of the question does not receive the attention which its importance merits.

The publisher's work is splendidly done and the general presentation of the subject is such as has not been surpassed in any monograph. B. E. M.

New Catalogue Just from the Press.

The C. V. Mosby Medical Book and Publishing Company, of St. Louis, has just issued their first large catalogue of medical, surgical and dental publications. This catalogue is considered by all who have seen it to be the best arranged and most beautiful catalogue ever issued by a medical publishing house. Many new editions and new publications are announced for early issue. Copies of this catalogue will be gladly sent to any requesting same. It will be seen from the appearance of this catalogue that the house of Mosby is rapidly forging to the front as a publishing house of international reputation. They believe in the square deal to their authors and customers.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Vol. IV., Gynecology. Edited by E. C. Dudley, M.D., Chicago, and C. Von Bachette, M.S. Series 1911. Chicago: The Year Book Publishers. Price, $1.25.

The volume on Gynecology of 250 pages presents the year's work on Gynecology, and gives in summary or in detail the important literature published in the year, and when one realizes that the writings of over 130 authors have been reviewed, one can appreciate the great value of this little work. It gives all the latest ideas put forward by these writers, and hence, is of in-

estimable value to every specialist, or even general practitioner. One has only praise for this little volume.

Vol. V of the same series deals with Obstetrics, and has the same plan of arrangement, and gives one the latest ideas of 1911, upon this important department of medicine. The authors are Head and Mix, with the collaboration of Joseph Lee and Herbert Stowe, both of Chicago. A. C. H.

The Practical Medicine Series. Comprising ten volumes of the year's progress in medicine and surgery. Under the general editorial charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School; CHARLES L. MIX, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Vol. VI. General Medicine. Edited by FRANK BILLINGS, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. SALISBURY, A.M., M.D., Professor of Medicine, Chicago Clinical School. Series 1911. Chicago: The Year Book Publishers, 180 N Dearborn St. Price, $1.50. Prices of the series of ten, $10.00.

This is one of a series of ten volumes issued at about monthly intervals and covering the entire field of medicine and surgery. Each volume being complete for the year prior to its publication on the subject of which it treats.

These volumes are of especial value to the general practitioner, giving him the cream of the year's literature in the various branches of medicine and surgery. The work is well edited, and one can find in a few minutes what would require very extensive reading of the best journals in the world.

For those interested in any special subject the single volume may be purchased. The present volume on medicine deals mostly with infections and gastro-intestinal diseases.

W. J. W.

The Goulstonian Lectures on the Sensibility of the Alimentary Canal. Delivered at the Royal College of Physicians on March 14, 16 and 25th, 1911, by ARTHUR F. HERTZ, M.A., M.D. (Oxon.), F.R.C.P., Assistant Physician and Physician

in charge of the Department of Nervous Diseases, Guy's Hospital. London: Henry Frowde, Oxford University Press, Hodder and Stoughton, Warwick Square, E. C. 1911.

This is a reprint of the Goulstonian lectures delivered by Dr. Arthur F. Hertz in March, 1911, and published in *The Lancet* in April and May, 1911, with an extra chapter on the "Sensation of Emptiness and Hunger."

The work is the result of original research by the author on the Sensibility of the Alimentary Canal to Various Stimuli. The conclusions are very interesting and helpful in interpreting many of the painful conditions of the gastro-intestinal tract.

W. J. W.

Some Recent Blakiston Publications.

It is a fact, and worthy of note, that the most practical benefits which have accrued to the healing art in the past decade may be credited to the investigator who has limited himself to a particular subject, in other words, the specialist. The multiplicity of cases which are presented, covering every stage of the special disease, necessitates the adoption of the most expedient means of effecting a cure, and, as a consequence, the discarding of many of the arbitrary and time-honored procedures still practiced by the old-time physician.

This is the reason that the original monograph, short, pithy, covering in a concise form the essentials of the subject is invariably the choice of the busy practitioner. Some recent publications of this nature are: Ross, Induced Cell Reproduction and Cancer, $4.50; Murray, Hernia, $1.75; Hurry, Vicious Circles in Disease, $2.00: Moullin, Enlargement of the Prostate, $1.75; O'Reilly, Physical Diagnosis, $2.00. All of these books are published by P. Blakiston's Son & Co., Philadelphia.

A Manual of Surgery for Students and Physicians. By Francis T. Stewart, M.D., Professor of Clinical Surgery, Jefferson Medical College. Second Edition.

In this book the author has been most successful in encompassing in a small space the essentials of the practice of surgery. From the standpoint of the practitioner, it is of value as a guide to present-day surgery, containing, as it does, an outline of the

symptoms, diagnosis and treatment of practically all the conditions amenable to surgery. From the standpoint of the student, however, it presents a slight weakness, in reducing to a minimum the space devoted to Surgical Pathology and Embryology. Although there may be other text-books which deal fully with these subjects, it seems reasonable, in order that the student may obtain a thorough grasp of the principles which underlie the science of surgery, that each chapter should contain a full account of the pathology and embryology involved. In this way the student will learn to depend more upon his ability to reason and less upon his memory. This, however, is a defect which can readily be remedied, and the book will no doubt be found acceptable to students, and go through many editions.

W. E. E.

A PALATABLE VEHICLE*

As physicians are probably aware, there are few vehicles for the administration of many medicines quite as palatable as those that are alkaline. An ideal vehicle is Grape Juice, especially a Grape Juice as carefully prepared as Smith's Grape Juice, bottled at Winona, Ontario. It is an undoubted fact that Grape Juice is a most valuable aid to the physician not only in the warm weather, but throughout the entire year. Grape Juice is most refreshing, especially when served from the refrigerator, and is mildly stimulating in character. At this season of the year, when a great many people resort to the use of cod liver oil in the treatment of chest troubles, it should be remembered that olive oil *administered with Grape Juice* makes a very palatable and valuable therapeutic agent, in the proportion of two ounces of Grape Juice to one or two ounces of olive oil, taken immediately.

As a cooling drink in fever, owing to its slightly acid taste, Grape Juice is most beneficial. It is also a general tonic, materially aiding in the building up of the system during convalescence from typhoid fever, and, what is only too common at this season of the year, the severer forms of la grippe.

Publisher's Department.

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Original Contributions

THE BIOLOGICAL ASPECT OF TUBERCULOSIS*

By A. H. Caulfield, M.D., and James C. Beatty, M.D., Gravenhurst.

Introduction.

Various immunological results have been found in connection with pulmonary tuberculosis, which have not in the past, however, been of much value for clinical application. This result is largely due to the fact that many reactions and laboratory procedures have been utilized almost entirely as either diagnostic or prognostic measures without sufficiently considering the two main factors of this disease, i.e., the patient's type of resistance, and the attacking bacillus tuberculosis, and the possible biological variations. Resulting from these two factors very different biological states are produced in different subjects, making towards similar clinical conditions. By viewing the case in the light of the different immunological results and the clinical aspect, it seems possible that a certain tentative classification can be established. Certain considerations from this lead us to believe that tubercular subjects may overcome their infection along different biological paths. Working chiefly with saprophytes, Andrews shows that different organ-

*Read at the meeting of the Ontario Medical Association, Niagara Falls, Ontario, May, 1911.

isms are typically repelled by different factors of the host's immune mechanism. In the human subject's resistance to clinical tuberculosis, probably all the different antibody products are involved. It is our desire to give some evidence to show that the varying clinical pictures are the outcome of varying biological conditions.

One of the most striking features of tuberculosis is its clinical variations. Thus, if one is given a picture of the amount and kind of anatomical involvement, one can form but little estimation of the infection's probable duration, its past variations, or its future possibilities; and one frequently finds that if to this there be added the results of the general clinical inspection and as accurate an anamnesis as it is possible to obtain, the careful observation of some weeks is further necessary before one feels acquainted with the type of case which even yet may develop unexpected traits. Intuitively, one may feel indefinite indications which may or may not be subsequently verified. Of course, these statements are comparative, and, like all such in medicine, depend to some extent upon the clinical experience and judgment brought to bear upon the case; but, under any circumstances, these considerations seem to be distinguishing features of this infection.

These peculiarities help complicate both the diagnosis and prognosis, and are chiefly concerned with the resistance of the patient. It is upon the type of resistance that these biological phenomena throw considerable light.

It seems necessary to consider the unusual range of tuberculosis infections. Roughly, we have the clinically normal, who give tuberculin reactions, involvement of glands, serous membranes, skin, etc., which apparently remain confined to these structures; the variations of pulmonary tuberculosis, and finally the typical miliary tuberculosis or tuberculous septicemia.

Now, the various immunological procedures that have been meant to aid diagnostic and prognostic values, even in pulmonary tuberculosis have been confined to certain distinct types; but in the main it has been the results obtained with the "normal" that have prevented the general acceptance of the tests in purely clinical work.

Usually the tests fail to give 100 per cent. positive results

with cases, and, as well, involve the normal, so that the general verdict is of what use are they in doubtful cases where most needed? It is probably not the procedures that are at fault, but rather our method of application. Agglutination, the precipitin and tuberculin reactions, antigen serum combinations, leucocytic and opsonic estimations, share this disadvantage.

If, however, one uses these methods not as an aid to diagnosis or prognosis at first, but rather to demonstrate evidences of the biological state—as one would use the various methods of the physical examination of the chest, to depict the anatomical involvement—the results assume not only an interesting but a valuable force. Obviously, the biological state—if demonstrated and understood in its entirety—must precede rather than accompany the anatomical involvement. The clinical responses are due to the biological variations.

As a means of showing these biological variations, there will be presented certain procedures, all of which have been carried out on fairly large numbers of cases.

Tuberculin Reaction.

(a) A positive result means only that the subject has been exposed to tuberculous infection and has reacted biologically. This specific state lasts for a varying period in both clinically normal and tuberculous subjects. Certain cases of pulmonary tuberculosis, after years of infection, may still show this markedly. This state may be taken as evidence of one part of the mechanism of resistance, and, by itself, can demonstrate only approximately the presence or absence of those bodies concerned in its production.

(b) A negative result presents three considerations:

1. No exposure.
2. Loss of sensitiveness.
3. Anergy—the development of a condition refractory to tuberculin.

It is not always possible to distinguish, in cases giving very slight reactions, between the second and third type. When loss of sensitiveness is taking place, it represents a partial victory by the infection over the host, and the accompanying clinical correlation probably depends upon the extent the particular

patient is utilizing the bodies concerned in the reaction for the maintenance of life. This can sometimes be approximately gauged by the estimation of other resistance products. The refractory condition does not seem to represent an infection victory, but rather the reverse.

Antigen-Serum Combination.

1. Inhibitive Reaction.

In attempting to solve this problem, it became possible to show with the sera of certain favorable cases, not giving evidence of sensitizers, an antigen serum combination or effect that is non-attractive or repellent to complement. Consequently, with the technic of the deviation test, complete hemolysis results. This reaction capacity can conveniently be termed inhibitive. For purposes of expression only it is convenient sometimes to speak of such inhibitive reacting sera as containing inhibitin. Further, if such antigen-serum mixtures are again treated by a sensitizer serum, the end result of complete or no hemolysis can be shown to depend upon the relative strength of the opposing sera.

2. Complement Deviation.

This phenomena must be considered in both a specific and non-specific light. As the former, it is the true Bordet-Gengou phenomena, as the latter it is exemplified by the Wassermann reaction for syphilis. Probably the results obtained in tuberculosis are influenced by both factors, but accepting a certain type of positive reaction as evidence of tuberculosis sensitizers, the following statements can be made:

(a) It is not obtained in the clinically normal, giving tuberculin reactions.

(b) Its presence in the tuberculous is usually found amongst the more unfavorable type.

These facts, as well, as other considerations, suggest two theoretical conceptions: either tuberculous sensitizers are not produced by favorable cases and normals showing tuberculous sensitiveness, or they are produced, though their presence is in some way masked.

3. Indifferent Reactions.

From the technic employed, a third type of serum becomes

evident, in that there is no demonstration of either sensitizers or inhibitin. This can conveniently for these purposes be termed indifferent, or class three.

Note.—As outlined in our previous paper, the inhibitive serum effect becomes differentially demonstrated when employed with strengths of antigen, which of themselves non-specifically fix the complement. With true antigenic strengths, no more is demonstrated than that these sera do not fix complement. For practically all this work an alcohol-ether extract of the bacillus has been used as antigen.

From the results of the immunological procedures so far dealt with, one may tabulate the following demonstrations:—

1. By tuberculin reaction.
   (a) Marked sensitiveness (hosts defence).
   (b) Loss of sensitiveness(infection victory).
   (c) Anergy or refractoriness (hosts defence).
2. By antigen-serum combination.
   (a) Inhibitive reaction—inhibition (class 1).
   (b) Complement fixation—tuberculous sensitizer (class 2).
   (c) Indifferent reaction—(class 3).

We wish to touch briefly upon the phenomena of opsonins and precipitins before proceeding to a discussion of the clinical values of these various procedures.

Opsonins.

In our hands the estimation of the opsonic content of the blood has shown that, while the variations of a series of opsonic indices would agree with the general clinical conditions, these results would not determine conclusions that could not otherwise be more easily obtained. In making our estimations, we have taken into consideration the number of phagocyting leucocytes as well as the phagocytic index, in the fresh undiluted serum, in diluted serum, diluted in multiples of two up to sixty-four; on the heated serum, on the heated serum plus 1-10 normal serum, and on undiluted unheated serum plus 1-10 normal unheated serum. In those cases progressing favorably we found that the stage of the disease played little or no part; cases showing marked allergy possibly giving a slightly higher index than those evincing anergy, all, however, giving a low index when compared

with the normal. The addition of 1-10 normal unheated serum to the patient's unheated serum acted in all cases showing favorable tendencies merely as a diluent, while in the few cases we have had showing marked loss of sensitiveness, this addition of normal serum gave an increase in the number of phagocyting leucocytes as well as the phagocytic index. (Cite case 864.)

Precipitins.

Considerable work with precipitins has been done by Von Ruck and others. The Von Rucks have been endeavoring to demonstrate a relation between the precipitins and fixation bodies in the serum content of tuberculous subjects. They claim that the precipitins bear an inverse ratio to the fixation bodies, and that when the fixation bodies are rising the precipitins are decreasing, and the subject is progressing favorably; while, if the precipitins are in the ascendant, the fixation bodies are lower, and retrogression is taking place.

We have been using Von Ruck's watery extract, as well as waxy extract and bacillin emulsion, as antigen for estimating precipitins, and while our results throw further light on some phases of the biological aspect of tuberculosis, sufficient work has not been completed upon which to base any definite statements.

An attempt will now be made to show some correlation between these various biological findings and the clinical course of the disease.

Tuberculin Reactions.

Considering the tuberculin reactions from the standpoint of onset, duration and involvement, variation in the course of the disease and its general prognostic value, we wish to point out that when the onset is acute, marked sensitiveness has been the rule, a history that has never been obtained in our cases showing definite refractoriness. With an increase of involvement, and as a general rule with length of duration, sensitiveness tends to disappear. We have had, however, instances of marked sensitiveness maintaining throughout a long period (3—6 years) of infection, with extensive involvement. In a few instances considerable variation of sensitiveness has apparently obtained throughout the course of the infection. Cases showing a defi-

nitely refractory tuberculin reaction do not show a tendency to marked and acute variations, while those showing marked sensitiveness are extremely liable to do so. From a prognostic standpoint, loss of sensitiveness is likely to be followed by retrogression, as has already been outlined. However, all cases showing marked sensitiveness or refractoriness cannot be classed as favorable without further discrimination by the results of the following reactions. It would seem that the results of this additional biological discrimination harmonize certain opposing observations upon the prognostic value of the different tuberculin reactions.

Antigen Serum Combinations.

Inhibitive Reaction.

Early cases, with slight involvement, in good general condition, nearly, if not always, have given this reaction. Clinical normals giving tuberculin reactions have so far all shown some inhibitive reaction, while those cases of favorably progressing glandular and serous membrane involvement have given this in full. In all those cases capable of work without unfavorable effect, though having extensive anatomical involvement and signs even of fairly marked activity, the inhibitive reaction has been present to some, though not usually the full extent. A rise of temperature on these cases does not seem to be the danger signal, calling for lessened physical activity, or even complete rest in order that favorable progress be made, but rather should lead one to investigate further for possible medical or surgical complication. Up to the present there has been no instance of a case giving and maintaining a full inhibitive reaction together with well-marked tuberculin sensitiveness or definite refractoriness, that has not progressed extremely favorably—usually making either an arrest or apparent cure, although this naturally is dependent upon the time of observation. Among the Turban stage 111 class of cases, where the immediate progress seems to be doubtful or stationary, traces of the inhibitin ranging to complete or almost complete inhibitive reaction have been found, but these cases have, with no exception, shown a varying loss of tuberculin sensitiveness. The fact that varying amounts of inhibitin may be obtained with considerable clinical response

and a bare ability to maintain a stationary local condition, theoretically does not seem at variance with one's conceptions if the reaction be regarded as a quantitative method of indicating what seems to be the main type of resistance contents. This makes one feel that each case must be considered by itself in the fullest manner, both clinically and biologically.

In those cases where there has been a gradual increase in the inhibitive serum content, there has followed an accompanying clinical improvement which has remained in marked fashion. On the other hand, numerous instances of loss of the inhibitive reaction has invariably been followed or accompanied by retrograde changes, which, at the time of the biological observations, might not have otherwise been observed. This seems of marked importance, as it gives one an earlier indication for regulating or checking the life of the subject than does the clinical alone. As has been stated, and from theoretical considerations, an unfavorable turn in an inhibitive reacting case may not always be preceded or accompanied by a loss of that serum content. However, on theoretical grounds, this particular retrograde tendency should be accompanied by a loss of tuberculin sensitiveness.

Reaction of Fixation—Tuberculous Sensitizers.

Cases showing tuberculous sensitizer are usually cases of doubtful tendency and extremely liable to acute and sudden clinical outbreaks, with accompanying alterations in the anatomical involvement. All of our cases coming under this head have shown tuberculin sensitiveness. These cases are subject to frequent setbacks, evidenced by onset of temperature, which can only be controlled by rest, even absolute rest in bed. In a favorably progressing case there will be found a lessening sensitizer content, a continued tuberculin sensitiveness, an improvement in general well-being and a stationary to slow anatomical clearing. The sensitizer content may even disappear entirely and an inhibitin reaction be obtained. Those cases retrogressing will show an increase of sensitizer content, a diminished tuberculin sensitiveness, and an accompanying general and anatomical increase of involvement. Since earlier observations have been made upon cases, many of which have given very distinct clinical indications of an early and fatal termination, it

has become evident that favorable local progress may occur in these cases, but in every instance where this has taken place rest has been carefully enforced.

Indifferent Serum Reaction.

This reaction has been found originally and confirmed in the definitely moribund cases, and others in which the main distinction seems to lie in their slightly plus and minus ability for slow local improvement, with varied clinical response. It has been followed in patients who have shown loss of tuberculous sensitizers and inhibitin, and, as far as ascertainable, is associated in the former with local and general subsidence, or even improvement, while in the latter, with unfavorable conditions both objectively and subjectively. Further, these relations obtain with all varieties of tuberculin type reactions, so that the possible biological states seem confusing. However, it is upon contrast cases of this type that one hopes to show immunological differences that may be here marked, and which may play an unusual and effective rôle in these cases.

What we wish to emphasize is the fact that the biological aspect is a most important factor for the thorough understanding of the tubercular condition, and, taken together with the clinical observations, is essential to the most successful handling of the patient. In these cases showing either inhibitin or sensitizer, the biological investigations will give an earlier indication of change than will the purely clinical, while, in the case of the indifferent sera, the clinical changes can be checked much more closely because of the reactions, each acting as a check on the other, thus lessening the chance of error and enabling one to guard more closely the progress of the subject.

POST-PARTUM HEMORRHAGE*

BY R. FERGUSON, B.A., M.D.
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Few situations require such promptness of action on the part of the obstetrician as that of post-partum hemorrhage; but while authorities are agreed on this point, there is unfortunately less agreement as to the best means of controlling the hemorrhage. Such a multiplicity of devices are suggested, that one is at a loss sometimes which to rely on, or the young practitioner finds when the occasion for action comes, that in the attempt to remember all that he has learned, he cannot recall anything that is definite or practical.

There are two general sources of post-partum hemorrhage: (1) Injuries to the genital tract which occur during labor, and (2) failure of the uterus to contract after labor is completed. The hemorrhage in the first class is not usually serious. It arises from lacerations of the cervix or perineum, and, less frequently, of the anterior vaginal wall. In every case of post-partum hemorrhage, the condition of the uterus as to contractility, should be ascertained at once. If the fundus, as felt through the anterior abdominal wall, is firmly contracted, it is presumptive evidence that the blood comes from the cervix or vagina. True, blood may be flowing from a lower uncontracted portion of the uterine cavity even while the fundus is firmly contracted above, but the occurrence is comparatively rare, and is a condition which most commonly follows cases of placenta previa.

The following are the common causes of post-partum hemorrhage, due to post-partum relaxation of the uterus: (1) Of nine post-partum hemorrhages which I have witnessed in the last ten years, three of them occurred in patients who had borne seven or more children, and all three were burdened with an excess of fat. Debility from frequent child-bearing. (2) Syphilis is another cause of post-partum hemorrhage. I had a case of this class some months ago. I did not suspect the cause until the child was five weeks old, when I found it was affected with a

*Read at the meeting of the Ontario Medical Association, Niagara Falls, Ontario, May, 1911.

syphilitic rash. (3) Prolonged or deep anesthesia. My hemorrhages were nearly all in cases in which I administered chloroform during labor. I think chloroform by inducing uterine paresis interferes with proper uterine contraction after labor. (4) The non-use of ergot. In none of my nine cases of hemorrhage had I used ergot at the close of the third stage, as I usually do. Notwithstanding all the doubt that has been cast on the service of ergot as a prophylactic or controlling agent in post-partum hemorrhage, I have never lost my faith in it. In the three multiparae cases referred to above, I felt that if I had administered ergot after expulsion of the placenta, the hemorrhage might have been avoided. (5) Over-stimulation of the uterus and too frequent compression of that organ, and excitation of premature pains by digital dilatation of the cervix, is not an infrequent cause of post-partum hemorrhage. In normal cases the pains, if left to nature, will come as rapidly and as forcibly as the well-being and safety of the patient demands.

Prophylaxis.—Post-partum hemorrhage is, to a large extent, a preventible occurrence. In debilitated multiparae, especially those with a history of former hemorrhage, pains should be taken to tone up the system prior to labor. I believe strychnine in some form is the best uterine as well as systemic tonic in these conditions. Syphilitic patients should, of course, receive specific treatment during pregnancy. With the onset of labor, two mistakes of an opposite character should be guarded against on prophylactic grounds. One, the interference with the natural course of labor, with a view to hasten its progress, by manipulation of the uterus. The induction of premature and inefficient pains often leads to post-partum hemorrhage by producing exhaustion and uterine inertia. Those patients who bear impatiently the preparatory pains of labor, may with advantage be given a hypodermic injection of morphine. It will, without hindering the progress of labor, render them more tolerant of their pains, more restful and less clamorous for interference. If any stimulus for uterine contraction is at all required during labor, we have in quinine a safe and efficient agent. It should be given in full medicinal doses. To promote ready absorption, it is administered preferably in solution.

The other mistake in the management of labor is permitting

a patient to become exhausted to no purpose under conditions which necessitate interference for the successful termination of labor. When labor is unduly prolonged without evidence of progress, there is some abnormal condition causing the delay, and unless remedied the patient, even if enabled to give birth to her child, will be so exhausted that uterine inertia supervenes and the resulting hemorrhage will be extremely difficult to control.

Although generally preventible, and when occurring, often due to faulty management, post-partum hemorrhage is nevertheless not of infrequent occurrence, and whether unavoidable or due to mismanagement, its proper treatment is of vital importance.

TREATMENT.

The treatment of post-partum hemorrhage practically resolves itself into the best means of overcoming the non-contractility of the uterus after labor. Manual compression of the uterus following the expulsion of the placenta, should invariably be practised and maintained until the uterus has retracted and remains firmly contracted. The uterus should also be gently but firmly supported, although not compressed, after delivery of the child and while awaiting the expulsion of the placenta. If spontaneous expulsion does not take place in fifteen or twenty minutes, Crede's method of expressing the placenta should be employed. The maintenance of compression of the uterus after delivery of the placenta is all important. Should contraction not follow and hemorrhage set in, a one per cent. hot iodine vaginal douche may be given, and, if necessary, a similar intra-uterine douche. Should hemorrhage still persist, resort may be had to the gauze packing. Before doing so the uterus should be explored lest the hemorrhage be due to retained fragments of placenta. Packing of the uterus as well as the vagina is necessary. Without the uterine plug, the uterus fills with clots, whereas an empty uterus is in the most favorable condition for contraction. When the cervix is fixed by a firm intra-uterine plug, the vaginal pack acts like a torniquet to the uterine vessels. Without the uterine plug we are liable to have concealed hemorrhage going on, as the relaxed uterus may in that case distend to receive a fatal volume of blood within its cavity.

But the double packing has a further effect, by reason of its shutting off the blood supply to the uterus. This causes accumulation of carbonic acid in the uterine circulation, and nothing will better provoke the uterus to contraction than the lack of oxygenated blood. Without contraction, the intra-uterine clot cannot, as some claim, exert sufficient intra-uterine pressure to stay the hemorrhage from the sinuses.

Forcible ante-flexion of the fundus upon the cervix is a means of controlling uterine hemorrhage worth remembering. Some contraction at the moment of flexion is necessary to effect it, as otherwise the relaxed and flabby uterus cannot be grasped and ante-flexed. Further, before ante-flexion is resorted to, be sure that the bladder is empty. Some advise pressing the cervix forward as well as ante-flexing the uterus. The objection to this is that it does not allow of the escape of clots. To effect ante-flexion of the uterus, employ pressure with one hand in the vagina, so that the anterior vaginal wall will rest upon the upturned palmar surface of the fist, and with the other hand, make pressure on the ante-flexed uterus through the abdominal wall. By this means the uterine walls are pressed together and blood clots are forced out through the cervical canal. There is no increased danger of infection in this procedure, as there is in intra-uterine treatment. Lax and thin abdominal walls facilitate the employment of this method.

I shall mention only one other method of treatment, viz.: Compression of the abdominal aorta above the level of the fundus, between the hand and the lumbar spine. The blood that is shut off tends to clot at the placental site. The blood that remains in the circulation above is kept for the use of the all-important nerve centres. In the meantime the muscles of the uterus are resting and regaining tone. With the other hand the condition of the uterus is kept under observation. The time during which compression is needed will vary, and depends wholly upon the cessation of the hemorrhage and the retraction of the uterus. The time may range from five to thirty minutes. This remedy is more suitable in some cases than in others. Patients with thin and lax abdominal walls are better subjects for this treatment than those with more rigid and muscular walls. In selected

cases, this device seems to me the most rational of all the methods of treatment.

Briefly summarized, my treatment of post-partum hemorrhage is as follows: 1. Always exercise manual compression of the uterus until the hemorrhage ceases and until continued uterine contraction ensues; 2. Employ the hot vaginal, and, if necessary, the intra-uterine douche; 3. The intra-uterine gauze tampon, with supplementary vaginal packing; 4. In suitable cases, forcible ante-flexion and compression of the uterus; 5. In patients in which the abdominal aorta can be readily felt, compression of that vessel; 6. Give hypodermically a full dose of ergot at the onset of every case of post-partum hemorrhage.

The after-treatment is plain. Keep the head low and the pelvis elevated. Apply heat to the feet and limbs. Employ hypodermic injections of strychnine and adrenalin as a cardiac stimulant, and saline injections to counteract collapse from anemia.

THE CAUSES OF INCREASED HEART RATE IN FEVER*

By V. H. K. Moorhouse, B.A., M.B.
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In considering the etiology of this very constant symptom of fever, we are at once struck with the complexity of the processes which may act as factors. The two main causes of heart acceleration in fever are, firstly, the action of the increased temperature of the blood, and, secondly, the action of the bacterial and metabolic products elaborated. The former cause is, to our mind, the most important, and will be dealt with first.

The increased temperature of the blood, acting in three ways upon the heart and its nervous mechanism, can be shown to be a powerful factor. These three ways are:—

First. Action locally on the heart.

Second. Action on the heart through its reflex nervous mechanism.

Third. Action on the cardiac centre in the brain, setting up impulses which are discharged on the heart through the accelerator nerves.

1. Much experimental evidence can be quoted to prove that the local action of heated blood on the heart causes acceleration. The perfusion experiments of Langendorrf[1] show clearly that, in the isolated mammalian heart, increase of temperature, up to certain limits, causes acceleration, and decrease of temperature causes slowing of rate.

Experimental evidence of this local heat acceleration in the hearts of various cold and warm-blooded animals is plentiful. We have demonstrated[2], in a series of experiments completed lately, that in the dog, after accelerators and vagi have been cut, the heart responds to the local stimulation of heated blood, with acceleration.

2. Mansfield[3] has shown that the acceleration observed in exercise is due to increase in the temperature of the blood coming to the heart, stimulating the sensory endings of the vagi, which cause afferent impulses to be sent to the heart by the accelerator

*Read at the meeting of the Ontario Medical Association, Niagara Falls, Ontario, May, 1911.

nerves. This constitutes a delicate reflex mechanism set into operation by small changes of temperature. In a series of slow-heating experiments on dogs, we have noted that the heart rate may show a slight progressive increase for a long period, and as soon as the temperature of the heart reaches certain limits, a sudden and considerable acceleration takes place. A rapid increase of heart temperature is greatly more effective in accelerating the pulse than is a slow rise. When a temperature increase is brought about with cut vagi an increase in heart rate is still seen, but is small if compared with that produced with intact vagi. The reason of this is that the sensory side of the cardiac reflex is cut and the heart acceleration is due to the local effect plus the heated blood stimulating the accelerator centre in the brain, which discharges impulses through the sympathetic system. Mansfield observes that when the carotid and vertebral arteries are tied, and thus any influence of heated blood on the centres is prevented, the temperature acceleration with cut vagi does not appear or is minimal. Also when the accelerator impulses are eliminated by ligaturing the sympathetic branches forming the Annulus of Vieussens or by destroying the Stellate Ganglia, the heat acceleration does not take place.

3. In a recent paper[2], we have described the effect on the heart rate of warming the carotid blood. We carried out many experiments with improvements on the technique of Kahn[4]. In these investigations the direct and reflex effect of heated blood on the heart was eliminated by cooling the return flow of blood from the head. We were thus able to obtain a purely central effect, and concluded that in the majority of cases, heat to the centres produces heart acceleration, but in a few experiments noted a definite slowing in the early stages of increase of temperature, which we attributed to a rise of vagus tone due to central stimulation. Clinically, a slowing of heart rate is sometimes noticed in the course of certain fevers. That present in basilar meningitis is undoubtedly due to stimulation of the vagus through increased intra-cranial pressure. In some cases of typhoid a heart rate of 90 has been seen with temperatures of 102-105° F. As has been shown, the increase in heart temperature in such cases would be sufficient to cause a much greater acceleration. There must be present, therefore, the counteracting influence of

vagus stimulation, causing the relatively slow rate of 90. It is evident, from our results, that the vagus stimulation was the effect of the heat on the vagus centre, and most probably not the toxic effect, as has been claimed.

We have proved that the acceleration caused by central heating was due to impulses from the accelerator centre thrown into increased activity by the action of heat. That decreased vagus tone was not responsible for the increased heart rate was shown by the fact that cutting the vagi did not do away with the central heat acceleration. Section of the accelerator fibres forming the annulus of Vieussens caused an immediate slowing of heart rate at high temperatures, and no further increase in rate could be elicited unless the heart temperature was raised.

4. In a series of experiments animals were subjected to external heat for periods of three to six hours, and at intervals the vagus was stimulated centrally and peripherally, in order to find out whether the activity of these nerves was influenced by heat. We concluded that with temperatures up to 42° C. (107.6° F.) and with a time duration of six hours no alteration in irritability of the vagus, centrally or peripherally, occurred. So that, within these limits variations of vagus tone evidently do not cause increase in heart rate.

5. Another probable cause of increased heart rate in fever is respiratory variation. If for any reason a hypernormal respiratory ventilation develops the carbon dioxide content of the blood will be decreased, and this, as has been shown by Jerusalem and Starling[5], will result in heart acceleration. The part played by respiratory changes in the causation of shock, which is characterized by a rapid pulse, has been well dealt with by Yandell Henderson[6]. Since the causes of hyperpnoia are so numerous, it is readily seen that this factor in increased heart rate is important.

A study of the literature with reference to the effect of toxins shows us that, while their action in producing fever is indisputable, their part in the causation of increased heart rate is supported by little experimental evidence. Charrin and Teissier[7], working with the toxin of B. Pyocyaneus, note as its effect on animals, a temporary rise in blood pressure and an acceleration of pulse, but the latter result may very well have been due to

the elevation of temperature, which was also observed. Mora and Doyon, also using Pyocyaneus toxin, conclude that it arrests the inhibitory action of the vagus, and therefore causes increased heart rate, but it will be readily understood that until the effect of increased temperature can be eliminated from such experiments very few of the circulatory changes in the early stages of fever can be ascribed directly to toxic action. There is, however, evidence that toxins act directly on heart muscles. Sharp[8] applied diphthero-toxin in Ringer's solution to the heart, and observed that a more powerful heart-beat at first appears, followed by weakening, with prolonged diastole. Histologically, Woodhead and others have found that various toxins, notably that of diphtheria, lead to degeneration of the heart muscle. From such evidence one must conclude that the toxins exert an influence on the character and rate of the heart-beat, but it is doubtful whether these influences operate until late in the course of a fever.

Dealing with the effect of toxins on the cardiac nervous mechanism centrally and peripherally, we can find much presumptive and a little direct evidence. That the toxins elaborated in various fevers cause changes in both nerve centres and fibres is proven by Rainy[9], who shows that diphtheria toxin produces direct histological changes in the motor cells of the cord in cases in which pareses of various kinds were present; Martin and others note the degenerative effect of various toxins on nerve fibres. Some direct evidence as to the toxic effect on cardiac nerves is afforded by post-mortem finding of vagus disintegration in some cases of sudden death from fever; influenza toxins have also been shown to have a degenerating action on the vagus. Henderson[10] and others points out that digitalis fails to act in cases of septicemia, and, judging from the results of the investigation recorded above, concerning the negative effect of heat on the irritability of the vagus, we must partially conclude that the failure of digitalis is due to the action of the toxins on the cardiac mechanism.

If a toxin has the effect of actively dilating the arterioles, it will indirectly cause an accelerated heart, due to the fall in blood pressure and lessened resistance. The action of toxins in this respect, however, is very variable, since Arloing and Cour-

mont[11] found that the toxin of pyococcus aureus caused vaso-dilatation and Charrin and Gley[12] note a vaso-construction with pyocyaneus toxin. We have, therefore, some evidence that the toxins in fever may influence the heart rate through depressant or degenerating action on the vagus mechanism, and indirectly through vaso-dilatation. It is necessary to state again that there appears to be no clear-cut evidence that the toxins directly increase the heart-rate in the intact animal, since changes which have been observed may be ascribed to the increase of temperature whose importance has been dwelt on.

In conclusion, one must remark upon the importance of the therapeutic means of reducing body temperature in fever, especially by bathing, etc., if the rapid action of the heart is to be checked.

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ADDRESS GIVEN BY THE CHAIRMAN OF THE SURGICAL SECTION OF THE ACADEMY OF MEDICINE, OCTOBER 17, 1911

BY HERBERT A. BRUCE, M.D., F.R.C.S. ENG.,

Associate Professor of Clinical Surgery, University of Toronto; Surgeon to the Toronto General Hospital.

GENTLEMEN,—In the first place, I wish to thank you for the honor you have done me in selecting me to preside over your meetings for the coming year, and to say that I am not unmindful of the fact that the position carries with it the responsibility of providing a programme which will maintain the high standard set by my predecessors. The work of the last session may be briefly summarized as follows:—

The following papers were read:—

"Infantile Spinal Paralysis and Its Treatment." By Dr. B. E. McKenzie.

"Inflammatory Tumors of the Abdomen, simulating Malignancy." By Dr. H. A. Bruce.

"The Untoward Effects of Delayed and Incomplete Operations." By Dr. A. Primrose.

"Arthritis Deformans." By Dr. Clarence Starr.

"The Management of Occipito-Posterior Positions." By Dr. Fenton.

"Introduction to a Paper on 'Pelvic Inflammation.'" By Dr. Marlow.

"Case of Injury to Brachial Plexus, resulting in Paralysis of Shoulder and Arm." By Dr. George Wilson (for Dr. E. E. King).

The following cases were reported:—

A case of Jacksonian Epilepsy, with Operation. By Dr. J. Fotheringham and Dr. Perfect.

Case of Atresia Vulva in a child a year old. By Dr. Norman Shenstone.

Case of Typhoid Fever, with Perforation and Operation. By Dr. F. N. G. Starr.

Case of Chronic Carcinomatosis, with Ascites, treated by

Intramammary Injection of Ascitic Fluid. By Dr. A. Primrose. (Reported by Dr. Stanley Ryerson.) (Autopsy by Dr. Oliver Mabee.)

Case of Epispadias Operation, with Transplantation of Ureters and Removal of Redundant Bladder Tissue. By Dr. F. N. G. Starr.

Two Cases of Acute Cholecystitis in girls under twenty years of age. By Dr. Stanley Ryerson.

Case of Dislocation of Hip and Shoulder. By Dr. N. A. Powell.

Cases seen in Roosevelt Hospital, New York, during recent visit. By Dr. Oldright.

Those of you who have attended the meetings during the past few years will have been painfully aware of the small attendance and of the lack of interest shown, and in view of this it seemed clear to me that my first duty was to diagnose the cause, and then endeavor to find a suitable remedy.

A study of the conditions made it obvious to me that papers, although often excellent, were not appreciated. In looking over the reports of sectional meetings in the Academy of Medicine of New York and elsewhere, I noticed that they had almost entirely eliminated the reading of papers, and I think we might very well take a leaf out of their book, and devote our time exclusively to the exhibition of clinical cases and case reports. Many of you will remember the very successful meetings which were held by the old Toronto Clinical Society, the policy of which society was to make their meetings largely clinical.

Taking all these facts into consideration, we propose that the policy in regard to the conduct of the meetings for the coming year shall be to do away with the reading of papers almost entirely, and to devote our time to the presentation of clinical cases and case reports. We may make one or two exceptions if we are able to secure a paper on some original work, either by one of our own members or by a distinguished guest. We hope that this plan will result not only in a very large increase in the attendance at our sessions, but also add considerably to the interest of the meetings. This style of meeting should also conduce to freer discussion and more friendly social intercourse, which, after all, are among the chief objects to be aimed at in meetings of this sort. Let your discussion be absolutely free and

your criticism frank and unrestrained, feeling assured that all is done with the kindliest intentions. In this way we may hope to derive the greatest possible benefit from the work of the session.

Although this section is described as the "Section in Surgery," it is by no means to be assumed that the attendance should be limited to those confining themselves to surgery. This section, I take it, is for the consideration of surgical diseases, and the general practitioner must, therefore, feel that he has as much business in it as in the "Section of Medicine," as we will have cases presented for diagnosis as well as to show the result of treatment.

I would like now to make a few remarks upon a subject which seems to me to be of the greatest importance, *viz.,* the necessity for special training before undertaking surgical work. Although at graduation men receive a qualification which confers upon them the title of physician and surgeon, the instruction and opportunities they have had during their undergraduate course do not render them competent to undertake major surgery. A few of the more fortunate ones will have served for a short time as interne in a hospital, during which period they will have had some training in doing dressings and assisting at operations. But the majority of the graduates go out without ever having assisted at an operation, or, in many cases, ever having done a dressing. They will have looked on at a limited number of operations, from which they will have derived practically no benefit. Under these circumstances it can scarcely be expected that they will be capable of undertaking even a simple surgical operation, much less an important major one. As a matter of fact, there is no provision whatever in this country for the training of a surgeon.

Before receiving an appointment at any of the large hospitals in England, even in a junior capacity, as assistant surgeon, the candidate is required to possess a special qualification in surgery, namely, the Fellowship of the Royal College of Surgeons. I would not for a moment even suggest that the acquisition of this degree makes a man a surgeon, but only that the work which is required in anatomy, physiology and pathology, with that in operative surgery, forms a necessary groundwork for surgery. Then, with the opportunity of assisting at operations and the

familiarity with the technique thus acquired, one may hope to become qualified to do good surgery.

If such care and training is necessary to fit a surgeon for operating upon hospital patients, surely we should expect at least a similar degree of efficiency demanded before he is considered qualified to operate upon private patients. Unfortunately there is no such standard in this country, and as a consequence many men who have received no special training in surgery undertake serious surgical operations. The results, as might be expected, are frequently deplorable. It seems to me a great misfortune that some provision is not made in Canada for special training in surgery, and I have often thought that the University of Toronto might with advantage institute a course extending over a period of at least two years, for such training as I have indicated above, when upon passing an examination a special qualification would be conferred. The possession of such a qualification would give confidence to the members of our profession and the public, that those holding it were competent to undertake operative work. That a great deal of indifferent surgery is being done is a great misfortune to the community in general, and tends to bring surgery into disrepute.

A very good start for anyone wishing to qualify himself to do surgery would be to act as house surgeon to a surgical service for a year, and then take the training that I have referred to above. With the new arrangement of services in the Toronto General Hospital, and, for that matter, I think I may also say at St. Michael's Hospital, the younger men have an opportunity of familiarizing themselves with surgical technique, which must be of inestimable benefit to them.

If it were not for intruding too much upon your time I should like to have said something about the subject of division of fees, which has been discussed a great deal in medical societies on the other side. Although I am sure that this evil does not exist to the same extent here as in the country to the south of us, yet I should like to see the subject discussed either in this section or, better still, at one of the general meetings of the Academy.

May I express the hope that our frequent meetings together may result in the strengthening of the bonds of friendship which already exist between the various members of this section.

Society Proceedings

OXFORD COUNTY MEDICAL SOCIETY

The annual banquet of the Oxford County Medical Society, which was held at the Mansion House on November 1st, proved to be one of the best of the excellent series of banquets held by the Society. The guest of the evening was Dr. Walter B. Geikie, M.D.C.M., D.C.L., LL.D., late Dean of Trinity Medical College, and the only living colleague of the Hon. Dr. Rolph, the founder of the first medical school in the Province of Ontario.

The toast list was short, the toast to the King being responded to by the gathering singing God Save the King.

The toast, "Canada and the Empire," was ably proposed by Dr. Andrew McKay, M.P.P., of Woodstock, and responded to by Doctors Ellis, Norwich, and Sutherland, Princeton.

The toast, "Our Guest," was proposed by Dr. McKay, of Woodstock, the senior member of the Association present, who graduated in the school of Dr. Geikie. He warmly eulogized the guest of the evening, who responded in a manner characteristic of this veteran medical man of the Province. The doctor possesses to-day an intellect as clear as when he was at the noon day of life. This was clearly demonstrated by his hour and a half address which bristled with descriptions of reminiscent scenes, and which, in a masterly manner, took in the entire history of medical education in the Province of Ontario from the day when Rolph established his first medical school in what was then "Muddy York," the building consisting of a lean-to shed about thirty feet long, in one end of which Rolph lectured to his students and in the other end stabled his cow, down to the present status of medical education as we see it to-day in the magnificent schools. Altogether the address was one of the most masterly heard in Ingersoll in many a day, and the men who made a sacrifice to be present were well repaid by the effort of Dr. Geikie.

The evening was interspersed with music by Dr. Heath and Mr. Egbert of Woodstock.

The banquet was one of the finest ever held in Ingersoll.

NEW SEARCHES ON RADIUM THERAPY FOR TUBERCULOSIS

BY DR. S. BERNHEIM, PARIS.

From a long memorandum well documented the author, in a paper read at the Twelfth French Medical Congress, held recently at Lyons, France, arrives at the following conclusions:

1. It is possible to inject radium in very small doses into animals and also into the organism of human beings. For a long time after the injections the organic humors remain radio-active, and this radio-activity constitutes a real state of defensive asepta of the organisms.

2. With a special radium salt, the dioradin discovered by Messrs. Dr. de Szendeffy and Prof. Béla Augustin, of Budapest, it has been possible to stop the progress of the infection on tuberculized animals. Even the most virulent cultures of the Koch bacilli have been stopped in their development by the influence of dioradin.

3. The result of different clinical experiments by Messrs. Danlos, Dominici, Desgrais and Wickham shows that different kinds of surgical tuberculosis have been cured by radium therapia.

4. At the present time "Dioradin" used in a great number of hospitals and sanatoria for the treatment of phthisis gives the best therapeutic results when the chemical composition is used under average circumstances.

5. These average circumstances consist in injecting "Dioradin" into patients of the 1st and 2nd degree or even of the 3rd degree, but to consumptive patients whose organism is in a good state of resistance. It should be remarked that this composition, although very active, never causes local reaction nor general reaction.

6. Injections of "Dioradin" are given by series of 40 punc-

tures. For patients slightly attacked one or two series suffice to stop the progress of phthisis. Tubercular patients severely attacked require from 4 to 5 series of punctures. But in any case, even those of a grave character, without cachexy, the treatment requires a much shorter time than that of a cure in a sanatorium.

7. Out of the 160 tubercular patients cited in this work and taken at different degrees, and submitted to injections of "Dioradin" by different clinical surgeons, there were 6 deaths and 4 patients of the 3rd degree where the treatment was inefficacious. That is 10 failures out of 160 cases treated under the most unfavorable conditions. No therapeutic or hygienic method has ever produced such favorable and demonstrative statistics.

8. In the course of this work the author gives the reason for which serum coming from immunisated animals had failed in the anti-bacillary treatment. For tuberculosis, as for syphilis, in view of this constant failure, recourse must be taken to chemical compositions when they give certain and direct proofs of the action on the disease.

CLINICAL SOCIETY OF NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL

Meeting Oct. 2nd, 1911.

Dr. T. H. Morgan showed a typical case of cancer of the stomach in a patient 73 years of age, a laborer in good health up to three months ago. He first complained of loss of appetite, then loss of flesh, later pain and distress in the stomach, after taking food with periodical attacks of vomiting every 24, 36 and 48 hours. He was sent to the hospital and given a test meal. Dr. Jeffries examined the stomach contents: found free hydrochloric acid, Boas bacillus, etc., etc. The patient soon had coffee ground vomit and tarry stools. Marked cachexia. Physical examination showed thickening near pylorus on lesser curvature. Vomiting became more frequent after admission to hospital.

Dr. Albert Morrow advised a gastro-enterostomy in which Drs. Lynch and Sinclair concurred. The patient however refused operation. The case was shown as being a typical one of carcinoma of stomach.

A specimen of cancer of the stomach was presented by Dr.

Albert Morrow. The specimen was removed from a patient 60 years of age, the general character of the symptoms being the same as in Dr. Morgan's case. Vomiting constant, emaciation extreme. The tumor was distinctly felt in the region of the umbilicus, and an exploratory incision was made under local anesthesia, hyoscine and morphine being given before the operation. The patient lived only three days, but retained food and did not vomit after the operation. She might have recovered, but was in extreme condition of exhaustion when taken for operation.

Dr. Hays called attention to the frequent presence of extensive carcinoma, without positive symptoms, until the disease is incurable.

Dr. Jeffries said that the blood in carcinoma closely resembled that of pernicious anemia, and at times only an expert could differentiate it. The case showed secondary anemia with little or no leucocytosis. The stomach contents showed no evidences of pieces of tumor and there was a total absence of free hydrochloric acid. Pepsin was present.

Dr. Albert Morrow stated that cases of scirrhus cancer of the breast might live many years, in spite of considerable emaciation.

Dr. Maurice Packard presented an interesting case of pigmentation of the face in a man 72 years of age, suggesting Addison's disease.

Angio-sarcoma of the testicle, presented by Dr. Albert Morrow. Dr. Morrow said that he had operated on the patient for angio-sarcoma of the left testicle, which he removed. The patient was 45 years of age, and had an undescended testicle of the left side, which came down at the age of seven. Fifteen years ago the same testicle became swollen from an injury, but subsided under hot applications. Twelve years later a hydrocele developed on the same side. This was frequently tapped. A year ago the hydrocele seemed larger and was so annoying that the patient decided to have a radical operation. On examination Dr. Morrow found apparently two sacs, the lower one hard and elastic. He removed some fluid and thought that the former injections of carbolic acid might have caused the thickening of the sac. On exposing sac, was surprised to find a great number of blood vessels in the sac, and also a great deal of pain present.

Upon cutting into hydrocele, a solid, firm mass was found, resembling a blood clot. Further examination revealed a soft growth. Patient was informed that the growth was probably malignant, and consented to have it removed. Pathological examination showed an angio-sarcoma of the testicle. Patient is doing well.

Several interesting points were emphasized: 1. Undescended testicles are very apt to undergo sarcomatous change. 2. The history of injury and the question as to whether the constant injection of carbolic acid during previous treatment had anything to do with the condition. The prognosis was very uncertain. Angio-sarcoma may be less malignant than other forms, most cases however are very malignant. Coley's serum was worth trying.

Dr. Sinclair said he had injected many cases of hydrocele with pure carbolic acid, and had never seen a serious case from it, or any evidence of sarcomatous change. He had experience with Coley's serum in only one case. A year after using the serum the patient had bronchitis. He found a consolidation in one lung and a peculiar cough. The patient did not improve and died suddenly. Autopsy showed sarcomatous material in the lungs, peritoneum and abdominal wall. The case was one of general sarcomatous recurrence.

Dr. Doran had been working in sarcoma with amylopsin and trypsin. He gave hyperdermatically twenty minims of each every other day for about six weeks, gradually working up to 60 minims of amylopsin and trypsin. With care he had avoided abscesses.

Dr. Joseph Taylor reported a case of carcinoma which he had under observation four years ago. The patient was a young woman of 22, who had been married three years. She had a big swelling on the left side, which, on operation, proved to be a gray tumor. Dr. Jeffries reported a round-celled sarcoma. While ill in bed she developed swelling on both sides, and a pelvic tumor near the site of the original tumor. Examination nine months later disclosed an absolutely normal pelvis.

Amylopsin and trypsin had been carefully given during this period and had apparently been effective in producing a cure.

Selected Articles

DENTAL DISEASE FROM THE STANDPOINT OF THE PHYSICIAN*

BY R. J. ERSKINE YOUNG, M.D. EDIN., L.D.S. EDIN., LIVERPOOL, ENG.

Of late years considerable attention has been drawn to the deplorable dental condition of elementary and industrial school children. From a medical, from a dental, yes, and from a national standpoint the need is so great and the problem so big that, in spite of the establishing of dental clinics in certain places —for example, Cambridge, Liverpool, Kettering, and other towns —its solution is still afar off, and only the fringe of the subject has been touched. I propose to deal this morning with only one of its aspects, and I have come to Birmingham to ask you a question—namely, What is your everyday attitude to the whole question of dental disease and its far-reaching consequences? Medicine is a huge subject, and the ordinary medical man finds it almost impossible to keep in touch with its many aspects.

In my medical days I gave some special study to neurology, to insanity, to chest disease, diseases of children, and gynecology. But I frankly admit that odontology was conspicuous by its absence During the time I was engaged in medical practice I suppose I did not look at the teeth of six patients in six years.

Is it a case, gentlemen, of " tu quoque "? Do " you also " plead guilty in this respect? You are perhaps interested in gynecology, or you like eye work, or you have a " bent " towards the chest, or possibly you are a keen heart man, and take special interest in the detection of a faint post-diastolic murmur. But dental disease and its results—what of them? " Well," you reply, "of course the teeth are very important, now that I come

*Being a Paper read in the Section of Odontology at the Annual Meeting of the British Medical Association, Birmingham, 1911.

to think of it, but such cases find their way to the dentist." Yes, but you do not emphasize the necessity for treatment, and your patients may or may not attend to the matter, and they suffer accordingly. Now these remarks do not apply to many of the medical profession, but there are some to whom the following clinical pictures may be useful. Let us say you have a certain good family as patients. The daughter of the family has been anemic for long. The blood tonics you have prescribed are legion, and yet your patient does not get well. She still has a "bruit de diable," and giddiness, headache, and lassitude are complained of. You try a new tonic, elegantly written in the classic language, and while you replace your stethoscope in your hat you tell her mother that you think she is better to-day. You bid her adieu, step into your brougham, take up the *British Medical Journal*, and at once become absorbed in the report of the recent annual meeting at Birmingham, and especially in the proceedings of the Odontological Section. You have paid your visit. Excuse me, are you sure you have? for you quite forgot that your patient has oral sepsis, and you did not even glance at her teeth.

Those of you who are Edinburgh graduates or licentiates will be familiar with the story of the woman who was asked if she had any children. What she manifestly wanted to say was that she was a joyful mother of only two instead of the desired number of six. What she did say was that she had no children to speak of. If you had looked into the mouth of your anemic patient, you would have found that she had "no teeth to speak of." (It is a useful habit, gentlemen, to think in parallel.) A septic mouth, carious teeth, with perhaps a discharge of pus here or there, and chronic auto-intoxication. An early recognition of this condition on your part might have resulted in a more speedy cure, for I am very certain that an impoverished condition of the blood is at least aggravated (I might almost say caused) by oral sepsis. Take another case. A mother tells you that Mary has had a bad night with toothache but in the morning the pain went, and so did the child—to school. A year later Mary has developed enlarged cervical glands, and has got thinner, and is worried by a cough at night. You tell the mother, with your best professional manner, that you fear the condition may be tuberculosis, and you tell yourself that you are

more than sorry that you did not examine the child's mouth at the time. What is the life-history of that case? Toothache due to acute pulpitis, death of the pulp, septic pulp, suppuration, enlarged cervical glands, and tubercle has gained entrance to that child's system. You propose removal of the glands under chloroform, which may or not cure the condition, and a lifelong scar may be left. Gentlemen, how about that attack of acute pulpitis?

And what of cases you see by the score of long-standing atonic dyspepsia, and of gastric ulcer? Have you ever considered the relationship between a diseased, and therefore a defective, masticating surface, oral sepsis, and appendicitis, aggravated by the strain and stress of life, hurried meals, and bolted food? I hold that if appendicitis cannot be actually traced to diseased teeth and oral sepsis, the latter is at least a predisposing cause. When you suspect appendicitis, I earnestly ask you to give the state of the mouth much more than a passing thought.

Have you had any cases recently of anxious enteric? Your patient is comatose; the mouth is dry and very septic; the lips are cracked; the teeth are covered with sordes, and your patient is busy picking the bedclothes. Your one thought is, "Will these ulcers rupture?" or, "Can I stop this bleeding?" but you do not ask yourself, "Can I cleanse this mouth?" I know one man, my friend Dr. Halton of Liverpool (and let us hope he is far from being the only one), who lays special stress on the cleansing of the mouth in enteric cases on account of the risk of secondary infection of the parotid; and I do not think there is a single man here who will deny that the bowel condition is bound to be prejudicially affected by intense oral sepsis.

Speaking broadly, is any disease so common as dental caries? Tuberculosis is rife, but dental disease is infinitely more so.

Can you explain the remarkable attitude of the ignorant public towards any one who might speak to them about their teeth? Even to their doctor their position is: "I'll consult you when I am ill, or in pain; if I have a cough I'll ask you to prescribe; but my teeth are my own. I know best about them, so hands off, please." It does not strike them that their cough may be due to tuberculosis, and that the tubercle bacillus may have gained entrance by way of their carious molars. The man in the street is at least forty years behind the times as regards

his conception of dentistry of to-day and the malign influence of dental disease on his general health. As observed by me in a paper written last summer, and discussed before the British Dental Association, his ignorance is monumental. For instance, if he has had a cavity filled in one of his teeth, and the filling, in spite of careful preparation of the cavity, comes out owing to fresh decay, then, says he, "Oh, my dentist's work is faulty!" This is the opinion even of educated people, so great is their ignorance.

How are we to educate them? Much could be done if we had a sympathetic and enlightened press; and I wish the press were represented here to-day to hear me say so. The press is too willing to allow space for the publication of " copy " that would be much better left out, though I know a great Liverpool daily which refuses to condescend to any such thing. What a boon it would be if a man could take up his pipe and his evening paper and have his eyes opened, say, by a short article dealing with the point just referred to—the connection between diseased teeth and tuberculosis. Speaking to the Salop Branch of this Association, Dr. Wheatley, of Shrewsbury, said he considered dental caries, from the point of view of the physical well-being of the nation, probably the most important subject that had ever been brought before it. It seems to me that this disease and consequent oral sepsis strikes at the root of our national health and national stamina. A proper conception on your part of the relation between diseased teeth and the general health will assist you to give a more hopeful prognosis, and will militate in favor of successful treatment.

Since writing this paper my attention has been called to an able address delivered by Dr. John Hunter, in October of last year, to the students studying at McGill University, Montreal, on this very subject of oral sepsis. I am glad to find that he is a strong believer in the connection between the neglect of the mouth and disease of the body. He freely speaks of "septic anemia." The sum total of ill effects which oral sepsis produces is greater in his observation than any other single factor in medicine. Preventive medicine has done an enormous amount for the public health. I believe I am responsible for the term " preventive dentistry." These two words convey much to my mind, and

modern dental surgery will do an ever-increasing amount in assisting to prevent disease.

What is your idea of dentistry of to-day? Are you aware that the L.D.S. has to complete a course nearly as long as medicine, and the examinations are difficult and comprehensive? This qualification should be compulsory to all desiring to practise dentistry, even including medical men. Do you, the medical profession, still labor under the fallacious idea that dentistry is merely mechanical? Are you aware that it involves not only a knowledge of anatomy, physiology, pathology, and surgery, but also a minute knowledge of these subjects so far as they apply to dentistry? Do you know that all dental operations, if properly carried out, are performed on the lines of modern surgery? And now, if I have helped you to realize a tithe of what modern dentistry is, I ask you to do your part, each of you individually, in educating your patients. We have begun with the children by means of dental clinics, and I hope to arrange for the delivery of popular lectures to poor children and their mothers on the care of the teeth and the effect of neglect of them.

And what of education of the Government? Shall we ever get an enlightened and therefore sympathetic Government? So long as they do not arrogate to themselves title, any one may practise medicine or dentistry; and so long as the chemist is qualified who *sells* the poisonous anesthetic, any butcher, baker, or candlestick-maker may actually *administer* that poison, and if the patient dies under the administration the jury say of the administrator, "Poor man, he wasn't qualified; what else can we expect?" and they return a verdict of death by misadventure and express sympathy with the widow. And yet the Home Secretary is not wholly convinced of the necessity for legislation as regards this question. Now, though of great interest in themselves, these are matters on which I do not invite discussion, inasmuch as the attention of the meeting might be thus diverted from the main issue.

One other point and I shall close. I think I hear a medical man say, "It is only natural that you should want us to tell our patients to have their teeth preserved," and you hint that our object is financial in nature. I shall prove it is not so, for, if *care* of the teeth is in our favor financially, *neglect* of them is still more in our favor. Like preventive medicine, our object is the

improvement of the national health and the prevention both of dental diseases and the diseases resulting from it. Hence my plea for a closer union between the professions of medicine and dentistry. I wonder if I have succeeded in broadening your ideas as regards the latter?

When your Secretary asked me to read a paper at this meeting I was informed that politics were forbidden. I am going to disobey! Mr. Chamberlain has asked us as a nation to *think imperially*. In my turn I ask you as a profession to *think dentally*. And if I have enabled you to take a larger, a more comprehensive, because a more sympathetic, view of the whole question of dental disease and its consequences, especially in relation to the public health, this paper will not have been written in vain.

ABSTRACTS

Hepatic Sluggishness

No natural water has ever been made the subject of such exhaustive clinical study as that of the Vichy Springs, and it owes its reputation, not to a simple popularity due to its pleasant taste, but to a fame resulting from the crucial test of centuries of clinical observation.

Like other mineral water, their activity is somewhat greater at the spring than when taken in bottled form. Yet this is scarcely a disadvantage, since in many cases it allows of a milder, more prolonged effect which is especially serviceable in chronic conditions.

In practice, it is found that the water of Celestins is especially indicated in disorders of the kidneys, and such as depend upon the uric acid diathesis, rheumatism, gout, gravel and cutaneous lesions, such as eczema, etc.

Practically it may be said that the water of the Celestins spring meets every indication for the employment of Vichy Water. It has a mildly diuretic action of great power, and its action upon the liver and stomach is excellent. By its continuous use the blood is rendered more alkaline, deposits of uric acid in the form of sodic urates no longer take place, since the acid becomes promptly changed into urea, which is rapidly eliminated.

The bile becomes diluted, and calculi are no longer formed in the gall bladder. Those which may be present are disintegrated through the solution, in a strongly alkaline medium, of the mucus which holds the various parts together, and the fragments are discharged through the common bile duct into the intestinal tract.

In chronic hepatic disorders there is secured a greater flow of bile, and the improvement of gastric and intestinal digestion, due to the alkaline treatment, relieves the liver of a large part of the work previously given to it. In cases of hepatic sluggishness, attended with painful and slow digestion, the effects are often nothing short of marvelous.

In gastric and intestinal indigestion the use of Vichy secures a more free action of the bowels, digestion becomes more perfect, and the products of this digestion reach the blood in a better prepared condition.

Iodipin

Iodipin, introduced into materia medica by H. Winternitz, is a chemical combination of Iodine and Sesame Oil. The extensive literature already published on this Iodine preparation renders almost superfluous any allusion to its therapeutic importance. The latter is due to the physiological effect of this "iodised fat" inducing a regular, continuous iodine action, practically free from any undesirable by-effects.

These advantages of Iodipin are especially marked when applied hypodermically, and in such instances where the system is to be subjected to the action of Iodine for a prolonged period, this mode of administration renders valuable services.

In numerous cases, however, where special reasons preclude the subcutaneous exhibition of this remedy, it has been found from many years' experience that internal iodipin medication affords excellent therapeutic results. Iodipin is much more slowly dissociated and eliminated by the body than is the case with alkaline iodides, therefore symptoms of iodism are but rarely encountered, or when present are very slight, and instances of irritation of the stomach and intestines are practically unknown. Contrary to other Iodine preparations, Iodipin usually effects an improvement of the nutritive condition. Iodipin is therefore an excellent substitute for alkaline iodides, and as such shows every

prospect of further increasing in favor, as by the introduction of Iodipin Tablets it is now possible to obviate the difficulties often attending the administration of the fluid preparation by reason of its oily taste.

Trigeminal Neuralgia

In an excellent paper on this subject, the author, Dr. Alfred Fuchs, Assistant to the K. K. Clinic for Psychiatry and Nervous Diseases in Vienna, says under "Drug Therapy":

"In morphine we have a certain means for controlling a single attack; it is, however, clear that the possibility of drug addiction in all chronic painful diseases, particularly those of the central nervous system, calls for extreme caution. This danger is greater with hypodermatic injections than if given per os or rectum.

The Aconitine Therapy.—In aconitine we have a remedy which has a specific effect in Trigeminal Neuralgia. To obtain success two requirements are important. First, the employment of an effective and well-prepared preparation, and secondly, the following of a system by which the aconitine effect is supplemented by a purgative treatment. It is not easy to obtain an effective preparation. The official tincture aconiti radicis (German Pharmacopia 0.5—1.5 per die) is unreliable. The difference in the effect of the various aconitine preparations evidently depends upon the presence, in variable quantities, of a strongly active aconitine and the less active products contained therein. For these reasons the dosimetric pills, made with a solid mass, are more effective. Mousset's pills containing 2/10 mg. each, are an example. The maximum dose is variable. Under medical administration the quantity given can be properly controlled since the intoxicating symptoms, such as parasthesia of the tongue, lips and hands (Ulner region), are indications for the reduction of the dose. A cumulative effect of the drug is not to be feared because of the catharsis which must be combined with the treatment. The effectiveness of proper active catharsis for the relief of pain in neuralgias is widely known, but is, unfortunately, little considered in practice. Gussenbauer was the first who emphatically

called attention to the importance of forcible catharsis in the treatment of Trigeminal Neuralgia.

Gussenbauer's experiences with peripheral resection of the Trigeminus branches were so unsatisfactory that he discontinued this practice almost entirely and enriched the Therapy of Trigeminal Neuralgia with an evidently unessential, but really useful detail, so that Gussenbauer's injunction to attend to the bowels has come to be recognized as the most successful of all methods in the treatment of neuralgias.

Gussenbauer recommends a bland diet, preferable milk, during the time in which the colon is emptied by high injections and purgation. In serious cases of Trigeminal Neuralgias, calomel in ten hourly doses of 0.10 is indicated the first day and the treatment is followed by giving the patient ½ pint (¼ l.) Hunyadi Janos Water, morning, noon and night. (v. Wagner*). These large quantities of Hunyadi Janos Water are, without exception, well borne by the stomach; they produce watery stools 4—5 times daily which diminish considerably after two days. They cause no pain nor other disturbance to the general system and are of eminent value in the treatment of neuralgia.

*Imperial Councillor Prof. Dr. Julius Wagner von Jauregg.

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THE NEW ACADEMY OF MEDICINE, QUEEN'S PARK, TORONTO

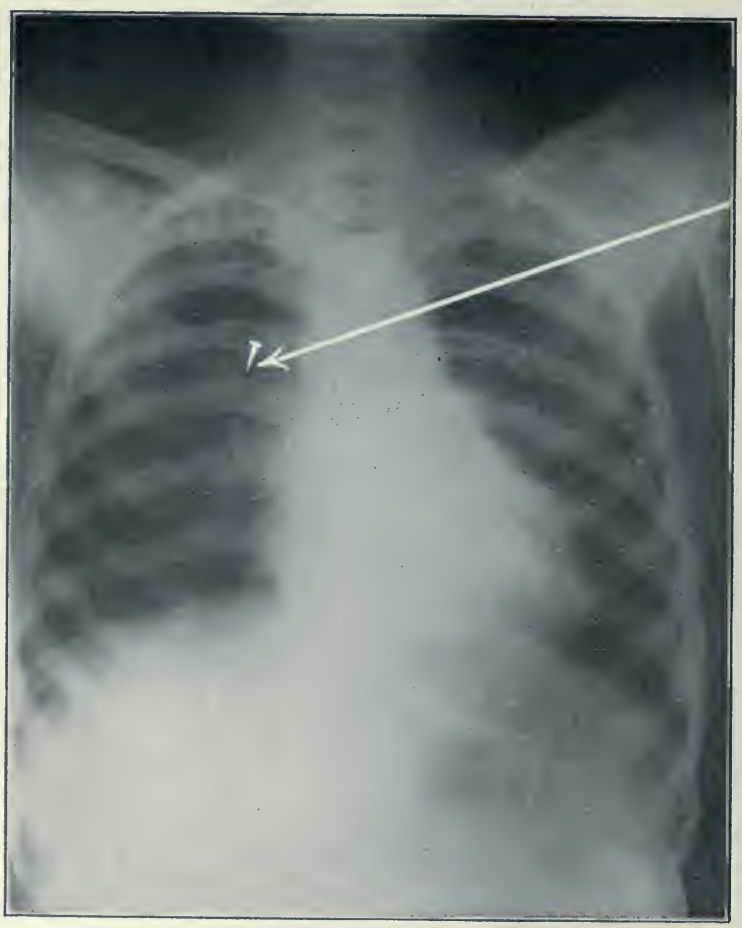
Editorials

UPPER AND LOWER BRONCHOSCOPY

Prior to 1897, foreign bodies lodged in the bronchi were generally recognized as beyond the possibility of surgical removal, except by operation through the chest wall. Little of a favorable nature could be said of such attempts as were made to secure the removal of foreign bodies from the air passages by this method, although Goeltz, in 1907, reported the removal of a foreign body from the right bronchus by means of an incision through the anterior chest wall.

In March, 1897, Killian, a German surgeon, succeeded in removing a piece of bone from a bronchus, by means of his bronchoscopic apparatus, and showed that a foreign body could be seen in a bronchus and removed even from a smaller sub-division of the bronchus. Since the publication of his report, bronchoscopy has been successfully employed in many of these cases. In addition to other successful cases by Killian, Guisez, a French surgeon, successfully removed in 1903, a nail from the third bronchial division, by means of lower bronchoscopy and forceps.

Schroetter, in 1905, reported two cases, in one of which he removed a tack from the right bronchus without anesthesia, by the help of upper bronchoscopy. In 1907 Kob reported two successful cases of removal of a body from the bronchus by lower bron-



(1) Diagram showing a tack in the right bronchus. Dr. S. Cummings successfully removed the tack, which had been located by upper direct tracheoscopy and bronchoscopy.

choscopy. In one of the cases, tracheotomy had been performed three months before.

Killian employed in his operations numerous tubes varying from 10 to 35 cm. in length and from 5 to 14 mm. in diameter; these are constructed of metal, nickel plated, and highly polished on the inside. The tubes are introduced through the mouth or through a previously made tracheotomy wound. The former method he describes as upper direct tracheoscopy and bronchoscopy, the latter lower tracheoscopy and bronchoscopy. Through the kindness of Dr. Cummings, Toronto, we have recently been allowed to see X-ray pictures of two of his cases, in which the appearance of a foreign body in a bronchus is clearly given. Both cases had been examined by Dr. Cummings by the use of the bronchoscope, and, in each case, the foreign body discovered and removed. The first case, a lad of twelve years, had inhaled a tack, which had been held in his mouth. The clinical symptoms observed were cough and suffocation. On the day following the accident, an X-ray picture having been taken by Dr. Cummings, the tack was observed to be in the lad's right bronchus. Chloroform having been given, upper direct tracheoscopy and bronchoscopy was employed, the tack was observed and promptly removed by forceps through the bronchoscope.

The second case, a lad of eleven years, had inhaled a tie pin, which had been held between his teeth. The tie pin being missed and not found, it was supposed by the friends that it might have dropped into the

(2) Diagram showing a tie-pin in the left bronchus. The tie-pin was successfully removed by lower tracheoscopy and bronchoscopy.

lad's gullet. No cough was observed. A week elapsed and the foreign body not having been recovered, an X-ray picture was taken by Dr. Cummings. This picture showed that the missing tie pin was lodged in the left bronchus of the lad. Chloroform was given and the tie pin removed by lower tracheoscopy and bronchoscopy. During the operation, Dr. Cummings observed that the sharp point of the pin had penetrated into the wall of the lad's trachea, while its globular head occupied a lower level in the left bronchus. The tie pin could be easily seized with the forceps, but all endeavors to extract it failed, and the point of the pin only became more deeply imbedded in the trachea. At the suggestion of Dr. Perry Goldsmith, who was present at the operation, the pin was again seized and pushed further downwards into the bronchus, in order to free its point from the walls of the trachea; it was then a very easy procedure to seize the point of the pin with the forceps and successfully remove it.

The skiagrams, showing the positions occupied by the foreign bodies in these cases of Dr. Cummings, convey a valuable lesson, and we are pleased to reproduce them at pages 364 and 366 of this issue.

J. J. C.

THE BIRTH RATE OF ONTARIO

From the report of the Registrar-General of Ontario for 1909, we learn that the total number of births registered for that year was 54,465, being a decrease of 2,690 from the previous year. The rate per one thousand of population is 24.4. In considering the question of a diminished birth rate in Ontario, the Registrar-General finds excuses for the race suicide which he deplores. He says: "There is no real encouragement, except that of duty, offered to our womankind to raise more children." To overcome this "discouraged" condition he thinks that the Provincial Government should imitate the policy of New Zealand, where provision is made for the payment to needy mothers of a fixed sum to provide for the expenses attending parturition.

The financial assistance offered to married couples to induce them to raise children might be successful in practice in New Zealand; but it looks so much like pauperism that it would not take well in Ontario. Possibly, if municipal corporations and nursing societies would co-operate in giving sympathetic aid to prospective mothers, other married women in need of such assistance might look on the prospects of maternity with less misgiving. Certainly, there is room enough for some such co-operative work in this Province. The State must have children; but the difficulty of securing servants, the care of children, the expense of providing for each

new arrival raise opposition to the decree in many a household.

Neither will this opposition be put down, to any great extent, by eloquent phrases about duty; for a people, bred from the strongest and most self-reliant races of Europe, whose prejudices and feelings they inherit, will not contravene these prejudices and violate their natural feelings, except for the gravest reasons.

Looked at as an investment, if such a term can be properly applied to the raising of children, it does not follow that a low birth rate involves a total loss of a considerable part of the possible child life of a community. In fact the opposite condition—a high birth rate—may be synchronous with, if not causative of, an enormous loss of child life. So true is this, that the two terms—a high birth rate and a high death rate—bear a recognized relation to each other, are in fact co-relative to each other. For instance, in Ontario, the infant mortality under 5 years of age, excluding still-births, is 27.88 per cent. of the total death rate of the province; in Quebec, where the birth rate is very high, the infant mortality rate is 47 per cent. of the total mortality. In fact, one might say that, in Quebec, a vast number of children are born—but to die.

Still, the infant mortality of Ontario is larger than it should be and much of it is preventable. The Registrar-General says: "There is much necessity for instruction in the care of infants and young children amongst our people. It will be the aim of the

Provincial Board of Health to, in so far as possible, seek to educate our people in respect to this important matter and we hope that our efforts in this direction, as well as the case of preventable diseases, will, before many years have passed, be productive of good results."

Our medical readers, who have so much to do with the care of mothers and their infants, will heartily endorse this wish. If the removal of bad sanitary conditions be secured by the local Boards of Health; if instructions, given by physicians and nurses, limit or prevent maternal neglect, insufficient or improper nourishment, even a low birth rate in Ontario may be accompanied by a satisfactory increase in the native-born population. J. J. C.

HYDROPHOBIA

Not every person bitten by a rabid animal gets rabies —only 15 per cent. according to Horseley. The period of incubation varies—in some cases it requires only a few weeks for the symptoms to show themselves, while in others it may be several months. Of 131 dogs bitten by a rabid animal or inoculated by M. Renault, 63 presented no symptoms of disease during the four subsequent months. In the remaining 68, rabies was developed at periods varying from the 5th to the 120th day, 12 being attacked between the 30th and 40th, and 15 between the 40th and 50th days. So that about 52 per cent. of these dogs developed rabies.

A post-mortem diagnosis of rabies in an animal may be made by the discovery of the Negri bodies in its cerebrum or cerebellum. The Negri bodies, or corpuscles, described by Luigi Negri in 1903, are defined to be minute bodies, found as cell inclusions in the Purkinje cells of the cerebellum in rabies, and are believed to be the protozoal cause of the disease. In suitable cases, the search for these bodies is pursued at the laboratory of the Provincial Board of Health at Toronto, instead of the slower method of inoculating rabbits with rabic virus.

To a practitioner called in to treat a case of dog bite, and to the patient, a diagnosis of the dog's condition as to rabies is very important. Should the dog be slaughtered, and should its head, packed in ice, be sent to the Provincial laboratory? We think this procedure should be the rule.

Besides, if the diagnosis of rabies proves to be positive, treatment by Pasteur vaccination may be begun without delay, and with every hope of heading off the advance of the rabic virus from the periphery towards the nerve centres. More especially does the necessity for prompt treatment apply to cases in which the bites of rabid animals have been inflicted on the head and face. Intensive treatment may also be required in these severe cases. Should the finding of the bacteriologist be negative, torturing doubts and fears are set at rest, in a manner which could not have resulted from the combined diagnostic wisdom of the practitioner, a veterinary surgeon and the owner of the dog. If generally fol-

lowed, this procedure will lead to the sudden taking off of cross dogs, but, inasmuch as the bacteriological study of their brains will be more useful to mankind than the prolongation of their lives, they will not have died in vain.

We refer, of course, to cases of rabidity in which a reasonable doubt may intrude. Why wait until the rabidity of the animal is patent to all eyes? It is better to settle the question of diagnosis by the slaughter of the suspected animal than to let it live on to inflict further damage. J. J. C.

THE NEW HOME OF THE ACADEMY OF MEDICINE

After five years' existence, the fellows of the Academy of Medicine, Toronto, felt the need of a larger building wherein they might hold their meetings, and in which to house their library consisting of about six thousand volumes and constantly being added to. The old house acquired with the property at 13 Queen's Park has been wonderfully well adapted to the needs of the affiliated medical societies. In a large room, recently decorated in soft greens, hang the portraits of some of Toronto's best known surgeons and most successful and beloved physicians. Some of the originals have given to yesterday illustrious names, and some still live to answer "Adsum" to the roll call of the fellows of the Academy of Medicine. In another a number of very old prints presented by Sir William Osler, detain and interest even a passer-by.

The meeting rooms, stack room and smaller committee rooms, all suitably decorated, form the nucleus of an academy worthy of the city, worthy of those who fathered the idea and, we hope, an inspiration to those who may ere long wish to enlarge its borders.

On the evening of October 26th, the formal opening of the building was held. A few masses of golden blooms centred on the mantel shelves, an orchestra playing somewhere, a large marquee with its hospitable cup of kindness, and the cordial welcome of the President and Mrs. Powell made the very large number who responded to the invitations evidently glad that they came.

The President and Council may indeed feel proud of their success in unlocking for a "First Night" the old oaken portal of the home of Toronto's Confederacy of Medicine.

The Shields Emergency Hospital on University Avenue, just south of College St., is rapidly approaching completion. It will be a memorial to the memory of John Shields, brother of the donors. It will cost $75,000 and will have several operating and dressing rooms, with twenty-two beds. Part of the new hospital's equipment will be a splendid motor ambulance.

The first stated meeting of the Academy for the current winter took place on October 31st, when the fellows were honored with the presence of Dr. C. N. B. Camac, of New York City. Dr. Camac delivered a splendid address on a subject to which he has given particular study for many years past, "The Out-

Patient Clinic; its Aims and its Possibilities." We hope to reproduce this address in our next issue. President Dr. Powell entertained the guest of the evening with a number of fellows of the Academy and a few laymen at dinner at the Dean's House, University of Toronto. W. A. Y.

PERSONALS

Jane P. Sproule, M.R.C.S., L.R.C.P. Lond., who has been studying oto-laryngology in Vienna and London for the past fifteen months, has begun practice as a specialist at 47 Grosvenor Street, Toronto.

Dr. Herbert P. H. Galloway, 661 Broadway, Winnipeg, Man., announces to the profession that S. Alwyn Smith, M.D., M.Ch., F.R.C.S., late assistant to Mr. Robert Jones, F.R.C.S., of Liverpool, is now associated with him in the practice of orthopedic surgery.

Obituary

DEATH OF DR. ALEXANDER HUGH FERGUSON

Dr. Alexander Hugh Ferguson, formerly president of the Chicago Medical Society, and a surgeon known throughout the United States, Canada, and Europe, died on October 20th, at his residence, 4619 Grand Boulevard, Chicago, of blood poisoning.

He was born in Ontario, Canada, February 27, 1853. He was graduated from Rockwood Academy and Manitoba College. Later he became instructor in the Manitoba College.

In 1881 he was graduated from Trinity Medical College at Toronto with the honor of M.B.

Following his graduation from Trinity he visited American hospitals, and also those of London, Edinburgh, Glasgow, and Berlin. In 1889 he took a course in Koch's laboratory in Berlin.

He married Sarah Jane Thomas in 1882. His first practice was in Buffalo, but after a few months there he went to Winnipeg, where he practised until 1894. He took an active part in founding the Manitoba Medical College, acting as professor of physiology and histology and also as professor of surgery. He was first president of the Manitoba branch of the British Medical Association, and a member of the Provincial Board of Health.

At the time of his death he was professor of clinical surgery in the College of Physicians and Surgeons, in the Medical College of the Illinois State University.

He was elected professor of surgery in the Chicago Post-Graduate Medical School and Hospital in 1893, and assumed his duties in 1894. He was also surgeon to the Cook County Hospital for the Insane. He was appointed first lieutenant U. S. A. Medical Reserve Corps this year.

He devised many operations that were acknowledged by surgeons the world over.

He was decorated Commander of the Order of Christ by the late King Carlos of Portugal in 1906 for his excellence in surgery.

He was a member of the British Medical Association, International Surgical Association, American Surgical Association, American Medical Association, State Medical Society, Chicago Gynecological Society, and several others.

He was a thirty-second degree Mason and enjoyed fishing and travel. His widow and two sons survive him.

News of the Month

SURGERY AND ACETYLENE

The following excerpt is from an article of Dr. W. H. Irvine, an enthusiastic advocate of acetylene:—"Therefore, whilst I do not desire to pose as being dogmatic, I nevertheless put myself on record, without fear of contradiction, in affirming that we possess no other illuminant at all approaching acetylene, in pure, unadulterated light value, and from many years of experience in the use of the various other common illuminants, such as kerosene, coal gas, and electricity, in eye, ear, nose, and throat practice, I assert that no practitioner will for one moment think of using anything else, if he can secure acetylene, for by its rays he can readily differentiate the most delicate pathological changes in the mucous membranes; or in the fundus oculi; and in refraction generally, it is the ideal illuminant, for by its use the most minute terminal arterial or venous radicals may readily be distinguished; in fact, it supersedes the solar rays themselves, being always available and uniform in quality. In surgical practice generally the same can be claimed without the least extravagance of statement, as many hospital surgeons also realize."

THE CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA

The Clinical Congress of Surgeons of North America convened in Philadelphia, November 7th, and remained in session up to and including the 16th. The attendance at this important convention was exceedingly good. The committee on arrangements worked very hard in order to make everything satisfactory for those who attended. This is the second annual meeting of the Congress, and was under the presidency of Dr. A. J. Ochsner, with Dr. Franklin H. Martin as General Secretary.

The programme of the committee included clinics by the leading surgeons of Philadelphia in all the principal hospitals each day from 8 a.m. to 5 p.m., with seven evening literary meetings, at which eminent surgeons from other cities throughout the United States read papers and took part in the discussions.

CLIFTON SPRINGS SANITARIUM

One of the striking developments of recent years in medicine has been the increase in the number of hospitals and sanitariums. The advantages of institutions of this kind, in the treatment of many diseases, are apparent. The best results are only possible where the patient can be directly under the control of the physician; where correct diet, nursing, baths, massage and other adjuncts of medicinal or surgical treatment, which are so important, are at the physician's command.

Not all patients should be sent to a sanitarium, but there are many who can be treated successfully nowhere else. A constantly enlarging circle of physicians recognize this and are availing themselves of these advantages in their practice.

Only a short time ago, to many people, the name sanitarium was synonymous with an institution for the insane or feeble-minded or a retreat for alcoholics and drug habitues; but this the public has recognized as erroneous and has come to realize that a sanitarium stands for everything the opposite of these.

The modern sanitarium is, in reality, a luxurious home, supplied with every convenience for the welfare of the patient, and with the best of medical skill at his command. The patient's pleasures are consulted as well as his necessities, and every effort is made to make his stay both pleasant and profitable.

Clifton Springs Sanitarium was founded in 1850 by the late Dr. Henry Foster in the spirit of Christian philanthropy, and in 1881 was transferred by him to a Board of Trustees, that the philanthropic spirit of the place should be perpetuated. This is not a commercial institution, and no profits are paid to anyone, but to the limit of our ability these are applied for the benefit of certain classes, to whom special consideration is extended:

Missionaries, Teachers of Public Schools and Colleges, Clergymen, Physicians and Nurses are alike thus benefited.

Clifton Springs is located on the Auburn branch of the New York Central, and on the main line of the Lehigh Valley Railways, 40 miles east of Rochester and 64 miles west of Syracuse.

DR. BROUGHTON'S SANITARIUM

Dr. Broughton, who for many years has conducted a strictly ethical institution at Rockford, Ill., for the treatment of a drink or drug using man, invites correspondence with members of the profession throughout the Dominion. There are in the United States a large number of such institutions, too many of which are not what they might be. Dr. Broughton's sanitarium is, however, conducted in the most ethical manner, the doctor preferring to deal, if possible, directly with the family physician. Physicians who are interested should write to Dr. Broughton for his pamphlet in order that they may see what he is doing in this special line of treatment.

Gift to the University of Edinburgh.—Mr. Henry S. Wellcome, of London, has announced his intention of presenting annually a gold and a silver medal, accompanied in each case by a money prize, for competition in the class of history of medicine at Edinburgh University. The lectureship on this subject, which in the medical schools of Germany and America is now regarded as a most important branch of study, was instituted over two years ago in Edinburgh, when Dr. John D. Comrie was appointed to deliver the lecture.

Mr. Henry Rowland, who keeps one of the finest drug stores in the east end of Toronto, situate at the corner of Gerrard and Parliament Streets, has recently been appointed sole Canadian agent for Messrs. Riedel & Co., of Germany. This latter house is one of the biggest pharmaceutical manufacturers in the Fatherland, and Alderman Rowland, who is Chairman of the local Board of Health, is to be congratulated upon his appointment. Canadian physicians can procure any of the Riedel preparations from Mr. Rowland.

The Physician's Library

BOOK REVIEWS

The Deaf Child. A Manual for Teachers and School Doctors. By James Kerr Love, M.D., Aural Surgeon, Glasgow Royal Infirmary; Lecturer in Aural Surgery, St. Mungo's College, Glasgow; Aurist to Glasgow Institution for the Education of the Deaf and Dumb; Hon. Fellow American Laryngological, Rhinological, and Otological Society; author of "Deaf Mutism." Bristol: John Wright & Sons, Ltd. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1911. Price, 4s. 6d.

Those who have had anything to do with advising parents or teachers regarding the management of very deaf children have always been handicapped by their inability to secure any book dealing in a scientific way with such cases. To no one could have been entrusted the writing of such a book better than to Dr. Kerr Love, of Glasgow. Dr. Kerr Love has visited all deaf and dumb institutions of any importance throughout the world, and has notes on the most important. The institution in Belleville, Ontario, is mentioned, and the general management of the school praised, but attention is drawn to the fact that the course accomplishes not education so much as that it produces wage-earners. The treatment of the deaf child is divided into two classes, surgical and educational. Attention is drawn to the fact that in all deaf children, the removal of tonsils and adenoids is of very great importance, not because it will cure the deafness, but because it will give better nasal breathing, better general health, and better ability to speak plainly. He favors the appointment of aural surgeons to deaf and dumb institutions, for this will give the children very much better attention and scientific treatment for those aural complaints such as acute and chronic suppurations. The value of lip reading for those very hard of hearing is pointed out, and

he cites a case showing how expert a person may become in lip reading. Dr. Love once sat beside a pupil facing the teacher during a half hour's lesson on speech reading. He asked the teacher many questions about the lesson, etc., but he did not know until the next day that she (the teacher) was deaf, and had heard none of the questions. It is a delightful book to read, and one that should be in the hands of all aurists, those connected with deaf and dumb institutions, and school teachers and school doctors. P. G. G.

Some Recent Blakiston Publications.

It is a fact, and worthy of note, that the most practical benefits which have accrued to the healing art in the past decade may be credited to the investigator who has limited himself to a particular subject—in other words, the specialist. The multiplicity of cases which are presented, covering every stage of the special disease. necessitates the adoption of the most expedient means of effecting a cure, and, as a consequence, the discarding of many of the arbitrary and time-honored procedures still practised by the old-time physician.

This is the reason that the original monograph, short, pithy, covering in a concise form the essentials of the subject, is invariably the choice of the busy practitioner. Some recent publications of this nature are: Ross, Induced Cell Reproduction and Cancer, $4.50; Murray, Hernia, $1.75; Hurry, Vicious Circles in Disease, $2.00; Moullin, Enlargement of the Prostate, $1.75; O'Reilly, Physical Diagnosis, $2.00. All of these books are published by P. Blakiston's Son & Co., Philadelphia.

Hints for the General Practitioner in Rhinology and Laryngology. By Dr. Johann Fein, Privatdocent at the University of Vienna. Translated by J. Bowering Horgan, M.B., B.Ch., late house surgeon at the Hospital for Diseases of the Throat, Golden Square, London W. With forty figures in the text and two photographic plates. New York: Rebman Company, 1123 Broadway.

This is a very useful and practical book, even if there are only 215 pages. The aim is to be of use to general practitioners only, and, therefore, those diseases which may be satisfactorily treated

by the family physician are worked out in detail, while the sections dealing with topics properly belonging to those of more extended training are considerably curtailed. Furthermore, the book expresses the author's own personal views and experience, and it is all the more valuable for this feature. It is a pleasant and easy book to read, and one which should appeal strongly to general practitioners. P. G. G.

The Practical Medicine Series. Vol. V. Obstetrics, edited by Joseph D. Lee, with assistance of Herbert Stowe, M.D. Series, 1911. Chicago: The Year Book Publishers, 180 North Dearborn Street.

The object of these books is to give in concise forms all the important investigations carried on during 1911, on the subject of obstetrics. For example, the sero-diagnoses of pregnancy, the ferment and anophylactic theories of eclampsia, the antitoxins in treatment of toxemias of pregnancy, also the hemophilic diathesis in the new born, being treated by serum transfusions, is quite new.

One is also glad to see strongly condemned the treatment of placenta previa by accouchement force. Nothing could be more brutal. The better treatment may be divided into three alternates: 1. Tampon the vagina tightly when great hemorrhage and send for help; 2. Version by Braxlan-Hicks method; 3. Cesarean section in selected hospital cases.

Again, post-partum hemorrhage is divided in anatomical and functional. Among the anatomical causes are: 1. Changes in the uterine wall, e.g., fibroids, metabo-arterio-sclerosis. Among functional causes is atony of the uterus. The treatment advised is uterine massage, ergotin, and tamponade of the lower uterine segment, with iodoform gauze.

Eclampsia is generally thought to be a general toxemia, due to increased metabolism, and decreased elimination, and the value of taking the blood-pressure is referred to.

Altogether the book is most interesting as showing the many advances being made, even in so old and common-place a subject as obstetrics, where fools often rush in, where angels leave the case to nature. The book is a valuable contribution to the literature, and would be very useful to every general practitioner.

A. C. H.

A Pocket Medical Dictionary, giving the Pronunciation and Definition of the Principal Words Used in Medicine and the Collateral Sciences, including very complete Tables of the Arteries, Muscles, Nerves, Bacteria, Bacilli, Micrococci Spirilla, and Thurmometric Scales, and a New Dose List of Drugs and their Preparation, in both the English and Metric Systems of Weights and Measures, based upon the Eighth Revision, U. S. Pharmacopeia; also a Veterinary Dose Table. By GEORGE M. GOULD, A.M., M.D., author of "The Illustrated Medical Dictionary," "The Practitioner's Dictionary," and "The Student's Medical Dictionary." Sixth Edition. Revised and Enlarged. 34,000 words. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1911.

The publishers of this pocket medical dictionary deserve some credit for keeping the book in the pocket series, while the learned editor was adding some 4,500 new words which did not appear in the fifth edition. It deserves a large sale among physicians, veterinarians, and cultured laymen. J. J. C.

A Manual of Diseases of Infants and Children. By JOHN RUHRAH, M.D., Clinical Professor of Diseases of Children, College of Physicians and Surgeons, Baltimore. Third Revised Edition. 12mo. volume of 534 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Flexible leather, $2.50 net. Sole Canadian Agents: The J. F. Hartz Co., Ltd., Toronto.

This is the third edition of a book that must be very well known to many readers. It is well bound in soft leather, well illustrated, and printed in a good large type.

It is designed to be a book of reference, both for the student, to enable him to grasp the salient points in any subject, and also for the general practitioner, to whom it must be of great value. The subject has been condensed about as far, one would think, as is consistent with the object in view.

The article on "Infant Feeding," a subject which has always been looked upon as one of great importance, is up-to-date and arranged in a most readable and convenient form.

This book will be of great value to many practitioners.

Diseases of the Nose and Throat, comprising affections of the trachea and oesophagus; a text-book for students and practitioners. By St. Clair Thompson, M.D., F.R.C.P. (Lond.), F.R.C.S. (Eng.), Physician for Diseases of the Throat and Professor of Laryngology in King's College Hospital; Physician to King Edward VII. Sanitarium; formerly Physician to the Throat Hospital, Golden Square; Surgeon for Diseases of the Throat and Ear to the Seamen's Hospital, Greenwich, and Surgeon to the Royal Ear Hospital, London. With 18 plates and 294 figures in the text. London, New York, Toronto, and Melbourne: Cassell & Co., Ltd.

Those who have been familiar with the literature in recent years of rhinology and laryngology must have been delighted with the sound contributions from the pen of Dr. St. Clair Thompson. Therefore, a book coming from such a broad-minded physician and one who has served for so many years in a special sphere of medicine and surgery, gives expectation of a work of a high order of merit. Not only is the book of a high and scientific type, but it is based on the *personal experience* of the author. After a very extensive reading of this work we are forced to admit that it has no superior in the English language. The illustrations are excellent and exceedingly well chosen, those in colors being especially fine. The reviewer's appreciation of the excellent diagrams and illustrations cannot be better expressed than by stating that he has had a large number of them reproduced for teaching purposes. P. G. G.

Diseases of the Anus, Rectum, and Sigmoid; for the use of Students and General Practitioners. By Samuel T. Earle, M.D., Professor Emeritus of Diseases of the Rectum in the Baltimore Medical College; Surgeon in charge of Rectal Diseases at St. Joseph's Hospital, the Hebrew Hospital, and the Hospital for Women. J. B. Lippincott Company: Philadelphia and London. 1911. 476 pages; 152 illustrations.

A detailed description is first given of the anatomy and physiology of the parts under consideration, and the writer then proceeds to describe the methods of examination. In operations on the anus, rectum, and sigmoid, he prefers general to local anesthesia. He points out that the injection required

for local anæsthesia produces distension of the tissues, and so distorts the parts to be removed that it frequently happens that an insufficient amount is taken away, and a second operation is therefore necessary. Constipation, with its aetiology, symptoms and treatment, is then exhaustively dealt with. A splendid description is given of the operation of colostomy, with excellent illustrations of the different stages, and the same may be said of the chapter on extirpation of the rectum. Altogether, it is a very useful work on the subject, and reflects considerable credit upon its author.

The Surgery of Diseases of the Appendix Vermiformis and Their Complications. By WILLIAM HENRY BATTLE, F.R.C.S., Surgeon and Joint Lecturer on Surgery to St. Thomas' Hospital, Hunterian Professor at the Royal College of Surgeons of England, etc., and EDRED M. CORNER, M.A., M.B., M.C., F.R.C.S., Surgeon in charge of Out-Patients, Isolation Ward to St. Thomas' Hospital, Lecturer on Practical Surgery, Surgeon to Hospital for Sick Children, Great Ormond Street, etc. Second Edition. Constable & Co., Ltd., 10 Orange Street, Leicester Square, London W.C. 291 pages; 100 illustrations. Price, 10s. net.

This work forms a short, but complete, account of the various forms of disease of the appendix, with their complications and treatment. The authors present the subject in a very readable and interesting manner, and altogether we consider it one of the best monographs that has ever been published on the subject.

A Synopsis of Surgery. By ERNEST W. HEY GROVES, M.S., M.D., B.Sc. (Lond.), F.R.C.S. (Eng.), Assistant Surgeon to the British General Hospital; Surgeon to the Cossham Hospital; Senior Demonstrator of Anatomy at Bristol University. Third edition. Revised and illustrated. Bristol: John Wright & Sons, Limited. London, Simpkin, Marshall, Hamilton, Kent & Co., Limited. 1911.

The fact that within eighteen months the second edition of this book has been exhausted and the third issued, is in itself a recommendation that should attract all readers.

It is a book that is peculiarly of use to the student and to the general practitioner. The student can review the whole subject of surgery up to date in a very short time by running it over. It will bring back to him all that he has heard and learned on the subject. To the general practitioner who doesn't want to have to read through large volumes for the sake of finding some little point about which he is in doubt, this book will supply the information in a few minutes.

It is absolutely a synopsis of surgery, having everything in it in the most concise form, and will be found of infinite value to anybody who reads it. A. J. J.

The Prevention of Sexual Diseases. By VICTOR G. VECKI, M.D., Ex-President San Francisco German Medical Society; Member American Urological Association, American Medical Association, California State Medical Society, etc. With introduction by WM. J. ROBINSON, M.D. New York: The Critic & Guide Company, 12 Mount Morris Park West. 1910.

The introduction to this little volume begins by asserting the fact that "*The world does move,*" and goes on to show that, whereas a few years ago such a book as this would have been unpassable, as no one would have published it, because, as someone very truly said, "The discussion of the subject is attended with filth, and we besmirch ourselves by discussing it in public." Now, however, it states that "nice ladies" (at the meetings of some societies) "of all ages listen to the words Gonorrhea" (with a big G) "and Syphilis" (likewise), "without covering their faces with their hands—or even with a blush." But, notwithstanding even this advance, we are told a little further on, that "It is true we have not yet reached an absolutely sane position on the sexual question."

The author hopes that the statement that there are five million people in his country who are or have been tainted with syphilis, is somewhat exaggerated. We hope so too, but we can hardly agree with him when he says "Anarchism, no doubt, would be the highest form of government, but passable only when all people would be equally educated to respect the right of others." He appreciates the fact, however, that the bottom "of all social evils, prostitution and venereal diseases" is

"money." After discussing what would seem to be all the filth that it was possible to rake up, it is a relief to find such a writer own that "continence, chastity, absolute avoidance of all unlawful sexual relations, connections and practices, would solve our problem easily and at once."

Unfortunately this does not satisfy this writer, he believes in telling everyone all about it (venereal infection), beginning particularly with the young. If we remember rightly, is not this an advanced condition of what Jeremy Taylor calls "Holding the candle to the devil?" A. J. J.

GRAPE JUICE IN THERAPEUTICS*

The majority of the profession know of the so-called Grape Cure establishments existing in Switzerland Germany and other countries. Such establishments have of recent years become quite popular, as there is no doubt that it has been established that many forms of gastric and intestinal trouble can be cured by such treatment. That Grape Juice can be a valuable therapeutic agent, there is little doubt There is perhaps nothing quite as refreshing to the fevered patient as Grape Juice properly administered This is especially the case in the warm weather, when it can be served with ice. Grape Juice, properly prepared and bottled with the care as used in the laboratories of Mr. E. D. Smith, Winona, Ontario, contains undoubted medicinal qualities, being not only exceedingly refreshing and invigorating, but mildly stimulating in character. Cases are known of typhoid fever, where no medicine has been used outside of Grape Juice, with favorable results. The attention of the medical profession is called to the Grape Juice bottled by Mr. E. D. Smith, and medical practitioners can rest assured that when they prescribe this particular brand for their patients they can make no mistake. Smith's Grape Juice sells at as low a price as any other on the market, notwithstanding the fact that it is superior to, at least, many.

*Publisher's Department.

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